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ABSTRACT

Prepared especially for decision makers involved in designing appropriate programs for kindergarten children, this research monograph concentrates on four specific issues that have proven difficult in most communities. Chapter 1 explains how kindergarten entry age affects children's school success. Chapter 2 discusses the ability of tests to reliably measure kindergarten children's entry-level skills and progress. Ways in which tests are improperly used are pointed out. Chapter 3 describes the components of an appropriate kindergarten curriculum. Appropriate and inappropriate practices, discipline methods, environments, materials, and activities are contrasted. Chapter 4 discusses time requirements for appropriate programing. Considerations of entry age, testing, curriculum, and length of day draw upon material selected from the knowledge base of the early childhood profession, empirical research, educational theory, and practical experiences in programs across the country. Each chapter includes an extensive reference list and recommendations for educational policy. It is concluded that certification of kindergarten teachers in early childhood education, scheduling choices for parents and teachers, and a flexible curriculum suitable for a wide variety of children will result in kindergartens that are appropriate for the children they serve. A bibliography and list of position statements conclude the work. (RH)

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# Kindergarten Policies

# WHAT IS BEST FOR CHILDREN?

PS 017566

Johanne T. Peck, Ginny McCaig, and Mary Ellen Sapp

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RESEARCH MONOGRAPHS OF THE NATIONAL ASSOCIATION FOR THE EDUCATION OF YOUNG CHILDREN, VOLUME 2

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In ***Kindergarten Policies: What Is Best for Children?*** we have begun to discuss the philosophy and the do's and dont's of educationally suitable programs for kindergarten children.

In ***Developmentally Appropriate Practice***, S. Bredekamp, Ed., another NAEYC book, you will find much more detail about this important subject. NAEYC Order **#224 $5**

This book, NAEYC's fastest selling volume ever, presents the profession's consensus definition of what are appropriate and inappropriate teaching practices for children throughout early childhood. Especially relevant to readers interested in kindergarten policy are the position statements on developmentally appropriate practice in programs serving 4- and 5-year-olds and in the primary grades.

RESEARCH MONOGRAPHS OF THE NATIONAL ASSOCIATION
FOR THE EDUCATION OF YOUNG CHILDREN, VOLUME 2

# *Kindergarten Policies:*
## What Is Best For Children?

Johanne T. Peck, Ginny McCaig, and Mary Ellen Sapp

A 1987–88 Comprehensive Membership benefit

National Association for the Education of Young Children
Washington, D.C.

*We dedicate this book to excellent kindergarten teachers everywhere, and to the principals, parents, and other people who support them.*

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# Acknowledgments

THIS RESEARCH MONOGRAPH, the second in NAEYC's new series, draws on the efforts of many early childhood educators in a variety of settings. Only by calling upon the latest, most professional work could we offer the best thinking of the field on a topic that continues to be debated in many school systems. Through it all, our goal has been to focus on how school policies and decisions affect children.

We are especially grateful to these reviewers, who contributed such superb and voluminous suggestions for studies and resources to be included in the monograph: **Laura Berk, Harriet A. Egertson, Harlene Galen, Bess-Gene Holt, Lilian G. Katz, Samuel J. Meisels, Bernard M. Spodek,** and **Bonnie Tyler**.

Our appreciation is also expressed to **Stacie Goffin,** who so generously shared the early results of her work as director of an NAEYC MAG Grant. Her group has gathered copies of all the position statements and resolutions on young children that have been adopted by organizations and school districts. These materials are included in NAEYC's Information Service so they are readily accessible to other child advocates.

We also thank **Lorrie A. Shepard**, who provided information from her most recent review of the research on the effects of special programs designed for children judged not to be "ready" for kindergarten and the consequences of retaining children in kindergarten for a second year.

Many others played a key role in the thinking behind these important recommendations for decision making, including all those who helped shape NAEYC's *Developmentally Appropriate Practice in Early Childhood Programs Serving Children From Birth Through Age 8* and NAEYC's *Position Statement on Standardized Testing of Young Children 3 Through 8 Years of Age.*

Special thanks go to **Carol Seefeldt** and **Polly Greenberg** for their expertise about public school kindergartens, Head Start, and other early childhood education programs; and to **Janet Brown McCracken** for her expert editorial work on this monograph.

Hubert Humphrey challenged us all with his statement that

> the moral test of government is how it treats those who are in the dawn of life . . . the children, those who are in the twilight of life . . . the aged, and those who are in the shadow of life . . . the sick, the needy, and the handicapped.

Perhaps *Kindergarten Policies: What Is Best for Children?* will lead to professional practices in kindergarten education that are more closely aligned with a swelling body of research findings and expert practitioners' experience about how young children learn best, and eventually to improved programs for all our nation's children.

# Preface

SCHOOLS ACROSS THE COUNTRY are wrestling with pressing issues unique to their kindergarten programs. Whether public or private, kindergartens are expected to mesh with children's previous preschool and family experiences, to meet the demands of parents and educators for high-quality programs, to serve a diverse population, to achieve the school system's objectives, and to do it all within constrained budgets.

This research monograph has been prepared especially for decision makers—state legislators and staff in departments of education, school board members, school administrators, teachers, and parents. The public expects each of you to make informed, reasonable decisions as you collaborate to build appropriate programs for kindergarten children.

However, when you prepare to make those decisions, you often are confronted with lots of conflicting opinions ("Well, if it was good enough for me when I was in school . . ." or "How will that affect the budget?") and a scattered sampling of contradictory research that varies in quality. The definition of what good kindergarten programs really are may seem at best to be elusive, if not impossible, to determine.

Though opinions, personal experiences, and even a sprinkling of research can help guide the decision-making process, more in-depth information is required in order to develop sound, developmentally appropriate kindergarten policies. This volume will help you sort through some ideas about what good kindergartens have been and can be like. We draw upon the best of the knowledge base of the early childhood profession, an ever-expanding pool of empirical research, educational theory, and practical experiences in programs across the country. In doing so, we will try to make sense of that knowledge base and offer some direction for sound decision making.

We have chosen to concentrate on four specific issues that have proven to be especially sticky ones in most communities: entry age, testing, curriculum, and length of day. All four of these issues are intertwined far more than it might first appear. Why are they so interrelated? Because decisions about each of them must hinge on the ultimate goal of providing the best possible environment to further children's social, emotional, physical, and intellectual development—educating the whole child.

Schools ultimately exist for children. So decisions about kindergarten must be predicated on what we *know* about how children grow and learn.

***Schools ultimately exist for children. So decisions about kindergarten must be predicated on what we know about how children grow and learn. What we do know has been gleaned from the experience of expert teachers of young children, from theory, and from research.***

## Why these issues have come to be so important

The idea of educating children before first grade is not new, as Spodek (1985) succinctly points out. As early as 1647, Massachusetts required that each town establish a school for young children. Infant Schools, intended for children as young as 18 months in Great Britain, were introduced in this country in the early 1800s. Then for several decades this type of schooling fell into disfavor as the emphasis was placed on the mother at home as educator of her children.

Kindergartens, seen as more similar to a family setting than earlier schools for young children, emerged in the second half of the 19th century. Since then, kindergarten programs have been susceptible to the winds of change as society's expectations for education have shifted.

The kindergarten has had many roles during its short life. It has been seen as a bridge between home and school, a "training ground" for first grade, a way to help eradicate poverty, a tool to socialize young children, a source of moral instruction, a service to free mothers for employment, and a program to teach children to think logically. But whatever its perceived role, when budgets were tight, kindergarten was among the first programs to be cut back.

As the kindergarten movement grew, the closely related nursery education movement also thrived. Children younger than 5, enrolled in nursery schools from the early part of this century, were carefully studied by researchers and teachers who kept meticulous records about teaching strategies and how they affected children's learning and growth. In the process, a whole tradition for providing developmentally appropriate experiences for young children was set into place.

Various teaching theories and methods have come and gone in kindergartens and nursery schools as early childhood educators furthered our understanding about child development. The pressure to teach children to read in kindergarten first arose more than a century ago, for example. Even today, when the evidence continues to clearly point otherwise (Early Childhood and Literacy Development Committee of the International Reading Association, 1985), heavy emphasis is placed on children's academic development in kindergarten—at the expense of a more balanced curriculum. As one teacher lamented:

> Kindergarten used to mean brightly colored painting, music, clay, block building, bursting curiosity, and intensive exploration. Now the kindergarten's exuberance is being muted, its color drained, and spirit

flattened, leaving us with stacks of paperwork and teacher manuals. (Martin, 1985, p. 318)

And so we are still faced with issues about what the function of kindergarten really is in relation to families, education, and society. Where does kindergarten fit in? More importantly, how can we make the kindergarten year a positive, developmentally appropriate experience for all children? With that goal in mind, let us turn to some of the best professional research and thinking about kindergarten programs.

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# Chapter 1

## How does kindergarten entry age affect children's school success?

APRIL 1, OCTOBER 31, DECEMBER 1, OR JANUARY 1—every state sets its own cutoff date for children to reach their fifth birthdays and therefore be eligible to enter kindergarten (Burnett, 1986). This criterion, more than any other, has been used for decades to determine whether children will be allowed to attend public school kindergarten programs. These arbitrary dates have been chosen for two primary reasons: administrative convenience and to be as fair and as objective as possible in regulating which children are legally old enough to attend kindergarten.

In a few jurisdictions, school districts may set even earlier dates than the state requires, if they choose. Many districts also allow for exceptions to be made so that younger children can be enrolled, such as the child who was born a day or two after the cutoff. Lately, many parents have chosen to wait until their children are almost 6 years old before enrolling them in kindergarten. Therefore, actual ages for kindergarten entry vary widely across the country, and neighboring school districts may have different cutoff dates.

In our mobile society, these differences may create problems as children transfer to new schools. What if a child enrolled in kindergarten moves to a district that has a later cutoff date? Or if a child moves and becomes eligible midyear to enter kindergarten?

School entry age continues to be a major concern nationwide for other reasons, too. The public is well aware of the high kindergarten failure rates, and many people have read research documenting the difficulties that the youngest children in a kindergarten class may encounter.

In this chapter, we will first examine whom kindergartens serve. Then we will synthesize the most definitive research on kindergarten entrance age and offer directions for policy based on what we know about children and about the research on entry age.

***Kindergartners are truly delightful people!***

## Kindergartens are for children

With all the controversy surrounding issues about kindergarten, it is easy to overlook the reason for the programs' existence—children. Before we can make any decisions about kindergarten, we need to know about children who are 4, 5, and 6 years old, the typical age span in any entering kindergarten group.

Although a review of child development is beyond the scope of this monograph, we urge you to take the time now to remind yourself of what children are like at these ages; read some good descriptions of young children, consult with the child development specialist in your system. (Some excellent titles appear in the bibliography at the end of this book.) How do 4-, 5-, and 6-year-olds typically act? What can they reasonably be expected to know already? What people and ideas are important to them? How do they learn most effectively? And how do individual differences, culture, family income and education, heredity, and other life experiences affect their development?

In brief, when you review child development and think about the children you have known at these ages, you will find that kindergarten-age children are

- active, curious, and eager to learn;
- increasingly more cooperative and able to develop close friendships;
- proud to take responsibility for themselves as they learn to tie their shoes, put things away, and control their behavior;
- eager to please people who matter to them;
- interested in how they can use words and ideas;
- curious about nature and how things work; and
- able to learn best by touching real objects—blocks, paints, puzzles, animals, sand—and by moving around a lot, planning and discussing projects with each other.

At the same time, each child is different because of individual personalities, variable rates of maturation, and all that has already happened during the child's earlier years. Kindergartners are truly delightful people!

## How children with varying birthdates fare in kindergarten

Once you know some of the basics about young children's development, you can see how deceptively simple it is to concentrate only on children's kindergarten entrance age when making decisions that may affect them for the rest of their lives. We will do so here, however, because age is the most common and obviously objective and fair criterion for kindergarten entrance.

In the past decade, at least 17 states have moved their cutoff dates from late fall or early winter to earlier in the fall or to late summer (Uphoff & Gilmore, 1985) and changes are being considered in many others (Burnett, 1988). Why are states requiring that children be older when they start kindergarten, and what does such a move really accomplish?

**The effects of cutoff dates**

An alarming number of children are failing kindergarten or experiencing other problems attributed to early school entrance (Uphoff & Gilmore, 1985). Imagine, an enthusiastic 5-year-old starting school and being labeled a failure the very first year!

Younger children in the group generally have a slightly more difficult time academically in kindergarten and even throughout the elementary years. This has come to be known as the *birthdate effect* and usually is the rationale for moving entry dates back. The rationale is based on evidence about children's age and school success that has accumulated for many years.

One early study found that not only did "... those pupils who were *very bright but very young* at the time of school entrance ... not realize their potential" from kindergarten through graduation from high school, but probably their difficulties in school and social adjustment had "an adverse effect on adult life" (Forester, 1955, p. 81).

In a review of educational research from 1930 to 1970, another researcher concluded that "the majority of the research relating to entrance age of students as it relates to later school achievement indicated that children who entered school at an early age had more academic problems than later entrants" (Beattie, 1970, p. 10).

Nearly 20 years later, the results of similar research continue to confirm that kindergarten tends to be somewhat more difficult for younger children. For example, children with learning difficulties in kindergarten and first grade often had "a July to December birthdate, late maturation," and other characteristics in common (Donofrio, 1977, p. 349).

Throughout the primary grades, late birthdate children, especially boys, tended to be referred more for help with academic problems (DiPasquale, Moule, & Flewelling, 1980). Similarly, Diamond (1983) found a significant, long-term correlation between the percentage of both boys and girls classified as learning disabled and their ages at school entry. In yet another study, standardized test scores were lower for younger children in second grade (Huff, 1984).

The long-term effects of early kindergarten enrollment have also been documented. Elementary children in one school who failed a grade were

*Why are we surprised that many children fail kindergarten, if programs are not predicated upon what we know about how young children grow and learn?*

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generally in the youngest group of their class, whereas none of the oldest children in the group failed (Uphoff, 1985). Effects of early kindergarten entry on academic performance have been confirmed as late as seventh and eighth grade (Campbell, 1985) and have even been related to adolescent suicide rates (Uphoff & Gilmore, 1984).

With such seemingly convincing evidence, it is no wonder that there has been such a clamor to raise the entry age for kindergarten! Before we jump to a quick conclusion, however, we must consider all these research results in the context of what kindergartens have been and are. During the past 50 years, *the kindergarten curriculum and expectations of parents, teachers, and school administrators have fluctuated widely.*

Just to make sure we all are talking about the same thing when we use the word *curriculum,* we will use it in this monograph to cover everything that happens during the kindergarten day, including discipline procedures, free play, recess, and teacher-directed experiences. This broad definition is used simply because children learn from everything they do, whether it be waiting for a bus, modeling with clay, or eating a piece of candy.

Kindergarten programs across the country range from those that are highly teacher centered, scheduled, and based on isolated skill teaching by means of reams of worksheets, to those that are more developmentally appropriate and allow children to participate actively in planning and other aspects of the learning process. For example, the majority of kindergarten programs today attempt to teach children to read (Educational Research Service, 1986), and do so by dwelling on drills, despite evidence that children may lose interest in reading when forced to learn isolated skills too soon (Early Childhood and Literacy Development Committee of the International Reading Association, 1985). We also have a great deal of evidence that effective ways to teach reading (early literacy) in kindergarten are:

- reading and telling stories to children—every day;
- making lists, charts, and books recording children's plans, ideas, and experiences many times each week;
- sharing a variety of experiences across all curriculum areas and outside the classroom, pointing out print in the environment as it appears;
- weaving writing into all activities children do in kindergarten, and reading it to the children; and
- constantly encouraging children's families to read to their children, or just to enjoy looking at books together (Kontos, 1986; Schickedanz, 1986).

Why are we surprised, then, that many children fail kindergarten, if programs are not predicated upon what we know about how young children grow and learn, including how they grow and learn to be readers?

***Children learn from everything they do.***

*Young children being kept out of school are the ones who, if provided a flexible, appropriate kindergarten curriculum, could benefit most.*

---

**How policymakers and parents have responded**

Unfortunately for the children involved, the curriculum seems to be the last factor examined in the puzzle of so many kindergarten failures—if it is ever examined at all. Instead, school systems are trying an array of other methods to reduce failure rates.

***Push entry dates back.*** As reports of early-entry kindergarten failures spread and as more young children were forced to repeat grades, some educators and many parents, aching from the feeling that they and their children were failures, began to believe that children were "not ready" for kindergarten and therefore needed to be older when they entered school.

So school entry dates are being moved back. In taking this approach, well-intentioned policymakers fail to grasp the magnitude of the issue: "Although chronological age does play a role in children's academic achievement, age explains only a small fraction of the variation among children entering school" (Hebbeler, 1981, p. 11). In fact, several studies have shown that "the differences due to age are small and disappear with time" (National Association of Early Childhood Specialists in State Departments of Education, 1987), perhaps by the third grade (Gold, 1987). Changing the entry age by 2 or 3 months is not the way to reduce kindergarten failure rates.

***Administer tests.*** Some people claim scores on readiness tests predict school success and indicate children's socioemotional, physical, concept, and language development (Gredler, 1980; Simner, 1983; Spillman & Lutz, 1983). As a result, children are being tested before, during, and after kindergarten, to determine whether they will be permitted to enter school, which class they will be placed in, and whether or not they will be "promoted."

As we shall see in detail in Chapter 2, however, test results may not be very accurate, so children may not be assigned to the group that is best for them. Children tested in the spring are especially likely to be misassigned because they make great strides over the summer. Placement based on "readiness" tests will not substantially reduce kindergarten failure rates, either.

Not only are cutoff dates being moved back and tests being used to determine placement in response to kindergarten failure rates. Schools and parents are taking other actions in response to the news that early school entry could lead to failure at least in part because kindergarten was "simply too much too soon for too many young children" (Uphoff & Gilmore, 1985, p. 90).

***Make children wait another year.*** As parents have become aware of the dangers of early kindergarten entry, some have decided to keep their children at home or to enroll them in other early childhood programs for another year. These children are 6, or almost 6, when they enter kindergarten, and are often expected to be at less risk for academic problems simply because they are older. The problem for some of these children often does not surface for several years: They are older and more mature than their classmates and become bored. This not infrequently leads to lowered motivation to do what the class is doing and to behavior problems. In making decisions on kindergarten, the long term must be considered, too.

Other parents have been advised or even required by school officials to keep their children out of kindergarten for another year. If children are denied placement in kindergarten programs, even though they meet the legal age, some children's needs will undoubtedly go unmet. Vision or hearing problems may not be identified early, for example.

"The dilemma is that the very children being counseled out of school are the ones who, if provided a flexible, appropriate kindergarten curriculum, could benefit the most" (NAECS/SDE, 1987, p. 5). Of course, regardless of the cutoff date, some children will not receive remedial attention as early as they should. The only way to correct this problem is to screen all children before they reach school age.

Prekindergarten or "kindergarten readiness" programs and "transition rooms" between kindergarten and first grade have been introduced for children deemed too immature to benefit from school or seen as otherwise at risk for academic failure (Gredler, 1984).

Sometimes the groups are established without close consultation with parents, who have a wealth of information about their children that might indicate a more appropriate and different placement.

Most often the children assigned to these groups are males, minorities, children who speak languages other than English, and those from low-income families. In many ways, these programs could be considered a denial of children's civil rights (NAECS/SDE, 1987).

Children in these transition or pre-K classes are often labeled as "slow," an image that may stick with them throughout their school lives. Teachers, parents, other children, and even the children themselves may have lower expectations for success based on an initial uninformed school placement. The tracking system is no more appropriate for young children than it is for older children.

On top of all these problems, teachers with backgrounds in elementary education often are assigned to teach these groups of mostly 4- or 5-year-

*By repeating kindergarten, many children suffer loss of self-esteem and motivation.*

olds. Trained to work with older children, most of these teachers lack knowledge about the development of younger children and have little idea how to implement appropriate teaching techniques and to develop a suitable curriculum. Even when teachers are appropriately trained, there is the problem just alluded to: Many children, parents, and teachers feel being put in a transition class to be another version of "failing," of repeating kindergarten, so a stigma harmful to self-esteem.

In a review of about a dozen studies, Shepard and Smith (in press) reveal further convincing evidence indicating that these transitional programs, though not necessarily harmful to children, do not boost children's performance in school as had been expected, either. Children from transitional programs do about as well in first grade as other children enrolled in kindergarten at a young age.

At the same time, there is no guarantee that just living another year will bring the necessary maturity to deal with an ineffectively subject-separated, skill-by-skill splintered, strictly teacher-directed curriculum. In fact, children held out of school or denied placement with a diverse group of their peers are robbed of the great potential for developing social, language, and other skills that exists whenever children interact with each other and with caring adults in an environment that promotes learning through play and through a wide variety of carefully prepared projects.

Furthermore, in several test cases in the courts, the rulings have consistently held that children who are the stated legal entry age for kindergarten have the right to enter regular kindergarten and that a school system cannot refuse entry or place children in a special program in lieu of regular kindergarten.

The issue clearly is one of both ethics and legalities: "Public schools cannot ethically select some children who are eligible under the law and reject others" (NAECS/SDE, 1987, p. 5).

***Repeat kindergarten.*** Children who do get into kindergarten don't necessarily fare any better than those who are held back, if the work proves to be too difficult for them. In most communities, children are required to repeat kindergarten if they have an unsuccessful year.

Although some children may seem to make gains and even succeed during their second year of kindergarten, others may suffer a loss of self-esteem and interest in school. They may be labeled by teachers and friends as a failure, and expectations for their performance may be lower. Their entire school career may be at risk. These and other harmful consequences of retention have been widely documented (Norton, 1983; Plummer, Liniberger, & Graziano, 1987; Shepard & Smith, 1985, 1986; Smith & Shepard, 1987).

*The appropriateness of the curriculum to the needs and nature of young children is a more important factor than is entry age.*

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It is logical, then, that The National Association of Early Childhood Specialists in State Departments of Education (NAECS/SDE) concludes, "Not only is there a preponderance of evidence that there is no academic benefit from retention in its many forms, but there also appear to be threats to the social-emotional development of the child subjected to such practices" (1987, p. 3).

Regardless of which of these directions is taken to try to overcome the fact that younger children sometimes have a more difficult time in kindergarten and that so many children are failing kindergarten, the crux of the problem still is not addressed. Many children continue to flounder in their first year of school.

In any or all of these patchwork, quick-fix approaches to the problem, the most important factor is overlooked: the curriculum itself. Children are being blamed for their inability to keep pace with the curriculum. Instead of looking at entry criteria, we should be reexamining the curriculum to see whether it is appropriate for the children, because all children succeed when the curriculum is appropriate.

First, as succinctly stated by one early childhood consultant, we must conclude that "the only fair, nondiscriminatory entry criterion is age" (Gold, 1987, p. 2).

## Directions for policy

The research clearly indicates that entry age is just one predictor of children's school success, and a rather small one at that. These are some thoughts for policymakers and parents to keep in mind based on the research about children's kindergarten entry age and its effect on school success:

***Set a reasonable entry date.*** Moving the cutoff date for kindergarten enrollment back a month or two may ensure that a larger proportion of the children entering school are slightly more mature, but wide variations in development will always exist within the group due to other factors. The curriculum is more important than entry date.

***Reach all eligible children.*** If the cutoff date is further delayed, some children—who could most benefit from a good early childhood program—may be denied entry and thus access to remedial or medical services, or to the opportunity to learn from each other. Children who are clearly handicapped must be directed to special programs long before kindergarten, but those at risk for other reasons would have their needs neglected another

year. Schools in a democratic country have a moral obligation to serve the needs of all children.

***Include parents in the decision about the best placement for the child.*** If either the school or the family has questions about whether there is a good match between child and program, work sensitively to select the best program for the child. All options should be carefully explored and the long-range consequences considered. Placement in kindergartens with flexible, child-development-based curricula is clearly the best for most children.

***Reexamine the curriculum.*** Increasing the age of school entry is an ineffective and misguided effort to improve children's opportunities for early school success. Resources and energy should instead be redirected to offering a good program. Teachers may need additional training in early childhood education so they can be professionally prepared to work with young children. See Chapter 3 for details.

States and school districts are advised to implement the recommendation of the National Association for the Education of Young Children:

> **In public schools, there should be a developmentally appropriate placement for every child of legal entry age.** No public school program should deny access to children of legal entry age on the basis of lack of maturational "readiness." For example, a kindergarten program that denies access to many 5-year-olds is not meeting the needs of its clients. Curriculum should be planned for the developmental levels of children and emphasize individual planning to address a wide range of developmental levels in a single classroom. It is the responsibility of the educational system to adjust to the developmental needs and levels of the children it serves; children should not be expected to adapt to an inappropriate system. (Bredekamp, 1987, p. 13)

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# Chapter 2

## How well do tests measure kindergarten children's entry-level skills and progress?

EFFORTS TO IDENTIFY and help young children overcome potential learning problems, to assess children's abilities, and to measure what they have learned have led to a confusing array of checkpoints and evaluation techniques in school systems and communities throughout the United States.

Decades ago, when kindergartens were optional, when we had little information about the value of early detection and remediation, when there were few instruments to evaluate children, and when kindergartens were designed to strengthen all areas of children's development, the idea of "readiness" for kindergarten was not an issue. Every child who met the local age cutoff entered kindergarten without testing.

If a child had any potential disabilities, the kindergarten teacher discussed them with the parent and any specialists, and together they made a decision about the child's placement in first grade. Often, kindergarten teachers developed their own short checklists or other recordkeeping devices so they could keep track of children's progress. Occasionally large school systems administered a local or standardized test at the end of kindergarten before deciding about placement in first grade. The decision-making process was generally school-based, individualized, and consultative.

As the knowledge base of early childhood and special education grew, it became clear that children with problems needed to be identified long before kindergarten so that their difficulties would not be compounded during their formative early childhood years. State and federal laws in the 1970s required schools to locate young children with potential handicaps, screen them to identify possible problems, conduct further assessments to determine the exact nature of their difficulty, and enroll them in programs selected to meet their special needs.

Although good teachers and administrators never forgot that their primary responsibility was for each child in their care, they sometimes found themselves being judged on their success based on numerical data for large groups

of children. State and federal authorities, eager to prove that the programs were working, often used accountability procedures that were inconsistent with generally accepted methods for collecting individualized information that could lead to sound decisions for each child's education. Standardized performance tests were a common part of this accountability process.

Another trend was also beginning to emerge, as we have seen: Greater pressure was being put on teachers to teach more academic skills in nursery schools and kindergarten, frequently using methods and materials previously used only with older children. As a result, more children failed kindergarten. Entrance ages were raised to try to compensate for the problem, when in fact curricula were too difficult for many 5- and even 6-year-olds.

At the same time, the testing field burgeoned with new ideas about how schools could screen for potential disabilities, identify specific problems and assess development, and determine whether children were "ready" for kindergarten. As a result, even more children were denied entry into kindergarten or placed in transitional programs of some type. But children continued to fail in kindergarten.

All of these factors led to the use of tests as a supposedly objective and informed way to determine children's placement within the wide range of options available in some educational systems and as an indicator of children's progress within that system. Results of testing young children are not as accurate or reliable as many had hoped.

**Definitions**

**Reliability**—the degree to which test scores are consistent, dependable, or repeatable; that is, the degree to which test scores can be attributed to actual differences in test takers' performance rather than to errors of measurement.

**Validity**—the degree to which a test measures what it purports to measure; the degree to which a certain inference from a test is appropriate or meaningful.

(NAEYC, 1988, p. 45)

## WARNING: Test with caution

Before we consider the different types of tests that are used as bases for making decisions that can affect the future of every young child in the country, we first must be aware of the pitfalls of relying too much on test results before, during, and after kindergarten.

One of the major roadblocks to the value of any kind of testing of young children is that children change so rapidly—skills, abilities, and understandings blossom with great speed throughout the early childhood years.

*Ironically, the calls for excellence in education that have produced widespread reliance on standardized testing may have had the opposite effect—mediocrity.*

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At best, a test can only come close to being an approximate picture of the child, and the picture might be a little different if the test were to be given a few weeks later. Soon, the child may be able to hop on one foot, or recognize matching patterns, or follow directions better, or demonstrate some other isolated skill required of that particular test.

Another problem is that tests measure only a few areas of children's learning. Tests cannot tell us: what thinking processes children use to solve problems; whether children's curiosity is being enhanced; what strategies children use to get along with each other; whether children can appreciate beauty and diversity in the world around them; how kind children are to others; whether children are persistent in real situations; or whether children have a growing sense of responsibility for themselves and others. Tests do not, and cannot, measure the broad scope of what children are learning.

Therefore, the National Association for the Education of Young Children warns that

> assessment of individual children's development and learning is essential for planning and implementing developmentally appropriate programs, but should be used with caution to prevent discrimination against individuals and to ensure accuracy. Accurate testing can only be achieved with reliable, valid instruments, and such instruments developed for use with young children are extremely rare. (Bredekamp, 1987, pp. 12–13)

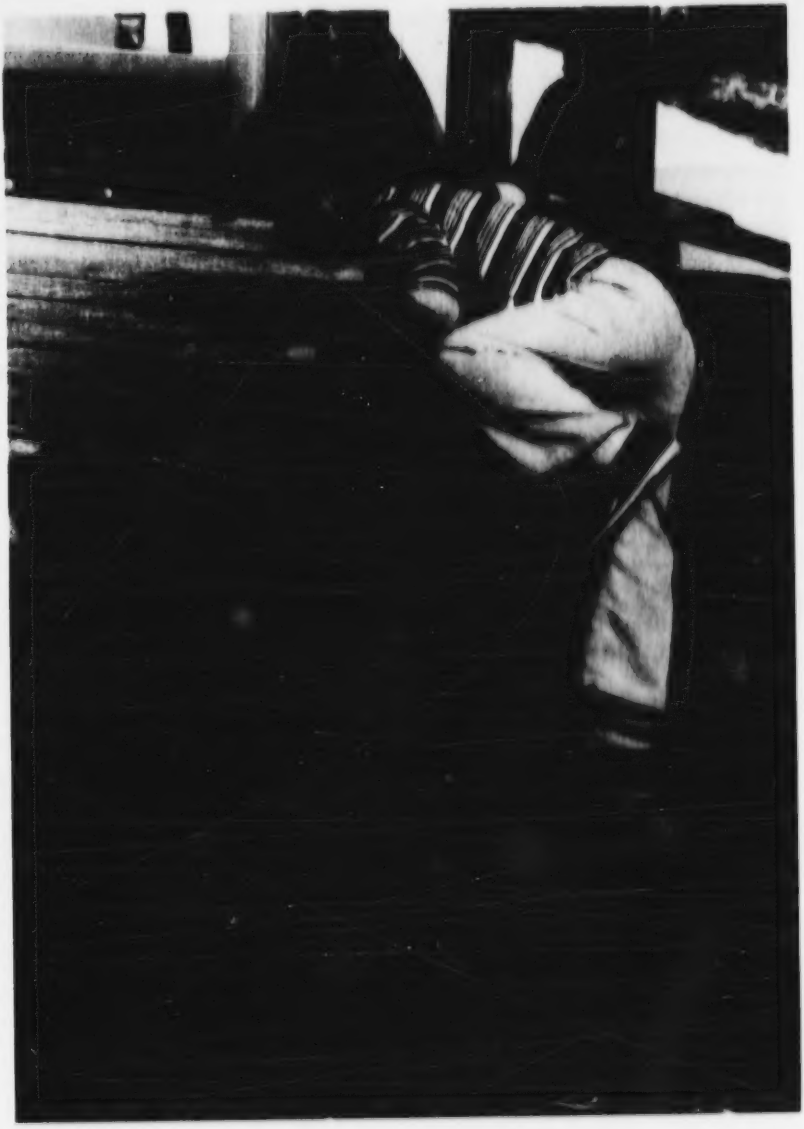
Furthermore, two national groups call into question whether most tests are really worth the effort, not only in kindergarten but throughout the primary grades. "The widespread use of standardized tests also drains resources of time and funds without clear demonstration that the investment is beneficial for children" (NAEYC, 1988, p. 42). "Days devoted to testing (and drilling for it) . . . tak[e] up valuable instructional time" (National Center for Fair and Open Testing, 1987).

NAEYC's position statement on this issue points out that skills assessed in testing are often far different from those that should be or actually are being used by children as they learn to read and use mathematics in appropriate programs. Consequently, "too many school systems teach to the test or continue to use outdated instructional methods so that children will perform adequately on standardized tests" (NAEYC, 1988, p. 42).

The ultimate consequence of all this testing is often detrimental to children and parents' perception of their children, and is misleading to all people concerned with educational excellence:

> Ironically, the calls for excellence in education that have produced widespread reliance on standardized testing may have had the oppo-

***Children change so rapidly—skills, abilities, and understandings blossom with great speed throughout the early childhood years. At best, a test can only be an approximate picture of the child.***



*Too many school systems teach to the test or continue to use outdated instructional methods so that children will perform adequately on standardized tests.*

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site effect—mediocrity. Children are being taught to provide the one 'right' answer on the answer sheet, but are not being challenged to think. Rather than producing excellence, the overuse (and misuse) of standardized testing has led to the adoption of inappropriate teaching practices as well as admission and retention policies that are not in the best interests of individual children or the nation as a whole. (NAEYC, 1988, pp. 42–43)

Within the context of these powerful statements, let us look at the three basic different types of tests that are used with kindergarten children. Although standardized performance tests are not discussed here, many of the same problems identified with other tests are associated with these tests, which are used in kindergarten and the primary grades to measure children's progress.

## Typical screening, diagnostic, and "readiness" tests

Before we can use tests to support children's development, we need to know the nature and purpose of the three basic types of tests that are given to kindergarten-age children.

Two types of tests, developmental screening and diagnostic assessment, are closely linked. Screening instruments are intended to be used only to identify children with *potential* handicaps. After screening, children with potential problems are further evaluated using diagnostic tests to pinpoint the exact nature of the difficulty. The third type, readiness tests, are intended to evaluate the child's capacities to function in school. Because each type of test has a specific purpose, the tests should never be used interchangeably or for any other purpose than that intended by the test makers. Even then their value is limited.

### Developmental screening

Screening instruments are aptly named because they are just the first step in the process of figuring out which children *may* have disabilities. They are designed to survey large numbers of young children quickly and efficiently. Good screening instruments are easy and inexpensive to administer and yet cover a wide range of potential problems such as hearing, vision, and health.

The primary difficulty with these instruments is that they are neither very reliable nor very valid. Some children who have problems are not

*Screening instruments are intended to be used only to identify children with potential handicaps.*

identified, while other children are referred for further diagnosis because they appear to have problems when they really don't.

The first group of children, called *false negatives*, may slip through the system's cracks until a different instrument is used that can signal the presence of some disability or until an observant adult detects that something is amiss.

The *false positives*, those children mistakenly thought to have problems, will have to undergo further testing, at which time it will be clear that remedial steps are not needed.

Because screening instruments are just a first step in the evaluation process, they should never be used to make any decisions other than whether or not to refer the child for further developmental assessment. Those interested in learning more about the screening process are referred to Meisels' book *Developmental Screening in Early Childhood: A Guide* (1985).

**Diagnostic tests**

When results of screening or an adult's observations indicate that a child's ability to learn may be impaired, individually administered diagnostic assessment tests are used to provide a more detailed evaluation of the child's functioning. Diagnostic tests must be administered by trained professionals and require more time than screening, but they provide far more information than screening tests.

**Readiness tests**

School readiness tests are supposedly designed to assess how well a child is prepared to benefit from a specific academic program. Most authorities and major education associations agree that academic programs are not appropriate for young children. Nevertheless, these tests are being widely used.

It is alarming to note that school readiness tests *all* have error rates in the range of 50%; that is, half of the children placed in special programs based on results of readiness tests should be enrolled in regular programs (Shepard & Smith, 1986). We could place children just as accurately (and at far less expense and time) by flipping a coin!

Due to this lack of validity, NAEYC (1988) recommends that "readiness tests should *not* be used to identify children potentially in need of special education services or for placement decisions" (p. 43). Similarly, the National Association of Early Childhood Specialists in State Departments of Education (1987) firmly states that such tests should not be "used to create barriers to school entry or to sort children into what are perceived to be homogeneous groups" (p. 7).

***Diagnostic tests must be administered by trained professionals and require more time than screening, but they provide far more information than screening tests.***

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Despite the overwhelming evidence to the contrary (see Meisels, 1987) that led to these strong position statements, many school systems use readiness tests to determine whether children will be assigned to kindergarten, first grade, or a transitional program, or be denied entry into the school's programs for another year. Because these tests are so widely used, and their misapplication can be at least harmful if not devastating to children, we will discuss the three types of readiness tests here: *skill measures*, *developmental assessments*, and *quick samplings* from either of those two types.

If your school system does not use these tests, has no intention of doing so, and bases decisions about children's placement and appropriate curriculum on a broad range of factors including birthdate, the results of any screening and/or diagnostic procedures, observations by parents and teachers, and a discerning eye with regard to the professional literature, you will find that the remainder of this chapter upholds your decisions.

If your school system uses readiness tests, or is considering doing so, it is very important that those in the position to make the decisions first be aware of some pertinent facts about testing young children:

- Most young children will never before have taken a test—paper-and-pencil or any other type—and they may well be scared of the procedure, the intimidating room, other children, and the strange adults. Therefore, the results will in no way resemble a complete or accurate picture of what these children can do.
- Most children have no idea what is expected of them in a testing situation. They may use the pencil or marker awkwardly, be more interested in what is going on around them, or just be bored. Most children are not accustomed to performing for adults on command. Even if they try, few children pay attention to things that have no interest for them.
- The time of day, what children have heard about tests from parents or other children, their lack of familiarity with following specific instructions, and many other factors can drastically affect test results.
- Children's first impression of school may be that of the test. If the test is difficult or seems too easy, or the people are not friendly, or the room is overwhelmingly large or noisy, children's impressions may not be positive.
- Even if tests are valid and reliable, if they are administered just prior to the opening of school or during the first few weeks, the teacher has little time to prepare for the needs of students as identified by the test (Molnar & Reighard, 1984). On the other hand, children's abilities change so rapidly that tests administered in the spring may not reflect the child's status when school starts in the fall.

*School readiness tests* all *have error rates in the range of* 50%!

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- Children vary greatly in development and come from a variety of backgrounds. Their behaviors cover a wide range, all of which may be typical and perfectly natural for their age. Ideas, language, the setting, and the tasks and materials may be unfamiliar or incongruent with the child's experiences. Other tests of children's abilities have been shown to be culturally biased (Hilliard, 1975, 1978, 1979).
- Parents, who know the child best, are rarely asked to participate or to provide information about the child. Parents can provide a medical history, alert the school to any potential problems, give a broader picture of the child's early development, and discuss personality characteristics relevant to learning (perseverance, interests, etc.). Test data should never be used without knowledge of sociobiographical information about the child (Morris & Melvin, 1981); the child's responses must be considered in context.

Findings of many studies clearly lead to the conclusion that although readiness tests may describe what children are like on the day they take the test, they cannot predict how children will do in any program (Lichtenstein, 1981; Meisels, 1987; Wiske, Meisels, & Tivnan, 1982). Despite these well-documented shortcomings, readiness tests are commonly used to predict whether children will succeed in kindergarten.

In addition, the idea of school readiness has changed. A few decades ago, readiness was viewed as the child's capacity to be successful in meeting the appropriate expectations of kindergarten or first grade. More recently, the emphasis has been on the skills children bring with them to handle an academic curriculum, rather than on their general capabilities. This shift reflects a widespread change in kindergarten practices characterized by Spodek (1981) as a change from concern for "continuity of development to a concern for continuity of achievement" (p. 179).

Without discussing any of the instruments used to determine whether children are "ready" for kindergarten, one can easily see that there are significant questions about whether any tests with young children have very meaningful results.

We now turn to a brief review of the three types of readiness tests. Keep in mind that although a few of the most popular tests are named as typical examples, many other readiness tests are similar in nature.

***Skill-oriented tests.*** These tests typically are paper-and-pencil tests administered to groups of children. No special training is usually required to administer the tests. Nevertheless, the results include a detailed profile of each child's levels of functioning in a variety of early academic skills. Test makers advise teachers to use the children's scores as a basis for curriculum planning.

*One can easily see that there are significant questions about whether any tests with young children have very meaningful results.*

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One of the most popular skill-oriented tests is the Metropolitan Readiness Test (Nurss & McGauvran, 1986), or Metropolitan or MRT as it is commonly known. First published in 1933, it was most recently revised in 1986. Early editions contained "readiness cutoff scores"; but the latest version is intended to be used to determine the level of instruction for which a child is ready (Bieger, 1985) and includes booklets so children can practice test-taking skills. It can be administered either to groups of children or individually, in several short sessions that take a total of about 90 minutes.

MRT's Level I tests, for use early in the kindergarten year, measure auditory, visual, and language skills including auditory memory, rhyming, letter recognition, visual matching, school language and listening, quantitative concepts, and copying. Each subtest yields a performance rating.

Level II tests, for use at the end of kindergarten or the beginning of first grade, measure the same basic areas, but the subtests cover different content and have different expectations. Subtests include beginning consonants, sound-letter correspondence, visual matching, finding patterns, school language, listening, quantitative concepts, quantitative operations, and copying. A Pre-Reading Skills Score plus performance ratings in each skill area are available.

The MRT has been thoroughly researched. Its ability to predict children's later scores on achievement tests has been termed "quite impressive," and Hughes (1987) found it to be highly reliable.

Although most of the skills measured in the MRT and other similar tests may be typical of those developed during children's first 5 or 6 years when appropriate educational experiences are provided, in an appropriate program methods other than paper-and-pencil tests (such as observation records or the children's drawings) would be used to document more accurately and fully children's development.

***Developmental assessments.*** The purpose of these tests is to evaluate a child's level of developmental maturity, based on sets of expectations or norms for each age level. These tests generally must be administered to individual children by people who have some specialized training. Such tests may cover a wider range of individual abilities than readiness tests do, but the information is more general and thus not as directly useful in planning specific curriculum experiences. These tests are often used to determine children's placement in kindergarten, pre-K, or transitional programs.

The Gesell School Readiness Screening Test (Ilg & Ames, 1972) is typical of this type. It is based upon the theories of Arnold Gesell and his colleagues, who established, through observational studies, norms for behav-

iors of infants and young children at different age levels (Ames, Gillespie, Haines, & Ilg, 1979; Gesell, 1930). Rather than being assigned a score on the number of items "passed," children are placed at a specific developmental age based on their performance on each individual task.

The Gesell must be individually administered and requires a trained examiner who has had practice with the instrument. Children supposedly do not need any test-taking sophistication for the Gesell, which takes about 40 minutes to administer.

Critics of the Gesell and similar tests claim that the results of these tests often are used to label children and are used to deny children entry into the public school system. Meisels (1987) charges that these labels "are based on an outmoded theory of child development, lack reliability and validity, and use a concept of developmental age that has never been empirically verified" (p. 69).

A second problem with the Gesell and other developmental assessments is that as many as one-half of all children eligible by birthdate to enter school may fall into categories indicating they are developmentally unready for kindergarten (Shepard & Smith, 1986; Wood, Powell, & Knight, 1984).

These criticisms raise several issues about the use of developmental assessments: Is it possible to develop, through observations, sets of behaviors that can be considered a developmental norm for children at any given age level, when there is so much variability in individual development? How can the reliability and validity of such tests be established? What steps can be taken to ensure that test results will not be abused by school districts? Meisels (1987) discusses these issues in detail.

Empirical evidence regarding the value of the Gesell and similar developmental assessments is sparse and contradictory. One study found that developmental age, as determined by the Gesell, was a better predictor of kindergarten success than chronological age (Wood, Powell, & Knight, 1984). The same test was also seen as a predictor of first grade success (Kaufman & Kaufman, 1972) and of sixth grade success (Ames & Ilg, 1964). The value of the Gesell is staunchly defended by the Gesell Institute based on informal reports of its value from a diverse group of schools using the test (Gesell Institute, 1987).

On the other hand, in a look at the effects of early retention (based on Gesell screening norms) on later school performance, children held back in kindergarten did not fare better academically than those promoted regardless of their developmental level (May & Welch, 1984). Children who were promoted to first grade did not exhibit the learning problems predicted. The children who were held back, however, had lower scores on standardized academic tests later in elementary school.

***None of the three types of tests commonly used to evaluate kindergarten-age children have a substantial research base to document whether they do indeed measure what they purport to measure, whether the results are attributable to real differences among children, or whether the results do indeed predict school success.***

***Quick samplings.*** These tests have been developed more recently and are designed to be quickly and easily administered by people with no training. Therefore, they yield less information than more thorough assessments.

The Brigance K & 1 Screen for Kindergarten and First Grade (1982) is typical of tests in this category. The items in the test were selected from two other tests, the Brigance Inventory of Early Development and the Brigance Inventory of Basic Skills. The new test is intended to assess students' language development, motor ability, number skills, body awareness, and auditory and visual discrimination. It takes only 10 to 12 minutes to administer and can be given by untrained personnel in the popular station format, where children move to different people and spots in the room for each section of the test.

## Abuses of tests with young children

The abuse of all types of tests—screening, diagnostic, readiness, and standardized performance—and their results appear to be growing along with their popularity. Among the most common abuses are

- using tests for purposes other than those for which they were designed,
- trusting tests that are neither reliable nor valid or whose quality has not yet been determined,
- using the results of one test as the sole basis to make decisions about children's school placement,
- allowing tests to dictate curriculum objectives, and
- failing to train teachers in the proper use of tests and their results (NAECS/SDE, 1987).

## Directions for policy

With so many drawbacks, readiness tests obviously are a poor choice for determining young children's future within the educational system. What then can school systems do to make more informed decisions about tests to be used for screening or curriculum planning?

***Select only tests that are valid and reliable.*** Why waste funds, staff time, and resources on something that may or may not be worthwhile? Include parents, teachers, and specialists in the decision-making process to assure that as much information as possible is considered. Make sure that the test has been validated with children similar to those who will take the test, especially if the children are culturally diverse or bilingual (NAEYC, 1988).

*Instead of asking "Are the children ready for kindergarten?" it is more appropriate to ask "Are our kindergartens ready for the children?"*

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***Use tests only for their intended purposes and in conjunction with other types of assessment.*** For example, children might be screened by a multidisciplinary team of parents, teachers, speech pathologists, public health nurses, physical education teachers, school psychologists, and others. Children with potential problems can then be referred for an in-depth assessment after consultation with their parents.

***Involve parents.*** Who knows better than parents what a child's skills, strengths, and weaknesses are? One technique that has been suggested is an in-depth interview with parents both before and after kindergarten (Darnell, 1976).

***Consider readiness test results as only one source of information to assist with appropriate curriculum planning.*** Every classroom will contain children with a wide range of abilities. School systems should require that activities to meet the needs of all children in the group are planned. Expectations should be fair and reasonable based on all the information gathered about each child.

***Never use tests as the basis to determine placement.*** Birthdate is clearly the fairest and most objective criterion, as long as the curriculum children will experience when they start school is play and project-oriented and warmly informal.

***Gather information regularly.*** Although good tests might provide some useful information if administered more than once during the course of the year, also include observations by parents and former teachers, samples of children's work, and other daily indicators of children's progress. A much more complete picture of the child will emerge.

* * *

There are no simple answers in education because the questions are so difficult and the subjects of research so unpredictable and always changing. However, there is no question that the only criterion public schools should use to determine kindergarten entry is birthdate. Tests are not acceptable.

Instead of asking "Are the children ready for kindergarten?" it is more appropriate to ask *"Are our kindergartens ready for the children?"* Neither raising the entry age nor using other "readiness" criteria will ensure children's success in kindergarten. Only an appropriate curriculum can make that success possible.

A wealth of information is available about appropriate early childhood education. The next chapter will outline some of the basic considerations schools must take into account if they are to meet the needs of their clients—the children.

***Neither raising the entry age or using other "readiness" criteria will ensure children's success in kindergarten. Only an appropriate curriculum can make that possible.***

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# Chapter 3

## What are the components of an appropriate kindergarten curriculum?

POLICIES THAT AFFECT the kindergarten curriculum should be developed through a careful process that incorporates the best information about how young children grow and learn. As we have seen, the purposes of kindergarten have changed with the tides of public pressure, the country's social conscience, school parameters, and educational research. Currently, our culture of accountability is putting great pressure on principals and teachers in general, and on primary teachers in particular, which in turn puts great pressure on kindergarten teachers.

Unless we keep in mind that the ultimate purpose of kindergarten is to promote children's development and learning, it is easy to be distracted by other forces. Each decision about kindergarten, whether entry age, use of tests, curriculum, or length of day, must rest upon what is best for the children being served. How do we determine what is best?

First, we need to consider once again what 4-, 5-, and 6-year-olds are like because we sometimes forget the obvious: Children in this age range have developed farther than younger children but not as far as older children. Maturation in all dimensions moves slowly. Although learning can certainly be stimulated, children cannot be expected to leap from a preschooler's way of understanding the world to a postprimary-aged child's way of mastering academics. A great deal of quite conclusive research over half a century tells us that kindergarten-aged children still think like younger children; they think differently, see the world differently, act differently, and have different skills than children of 7 or 8 (Forman & Kuschner, 1983; Kamii, 1981; Kamii & DeVries, 1978; Nelson, 1985). The kindergarten year is one more important year in a child's lengthy process of growing up. It is not developmentally helpful, or in the long run a success, to push and rush children through it.

Unless we know *who* it is that these programs serve, we cannot establish sensible goals or select appropriate activities and materials for kindergartens. Above all, kindergarten children are in the "want to learn" mode.

***That precious kindergarten year should be valued for itself.***

*Kindergarten children still think like younger children. Learning experiences should be designed accordingly.*

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Wanting to learn and understand is part of their built-in need to become like us and to feel competent. They are eager to master. They are curious, have a growing command of language, learn best by actively figuring things out for themselves, are becoming increasingly in control of their own behavior, and use their large and small muscles with greater skill then they used to. They believe that grown-ups know best and are motivated to please us; kindly guidance is the most effective form of discipline. Four-, 5-, and 6-year-olds are noisy, silly, and sensitive. A large body of literature is available for parents, teachers, experts, and others that describes the fascinating people who are kindergartners. It is very easy to "motivate" children in this age range because they are falling all over themselves with desire to learn—about themselves, about others, about the world.

Secondly, it is important to agree on what *curriculum* really means. Because children learn from every experience, it only makes sense that when we think of the kindergarten curriculum, we think of such things as discipline techniques, recess, individual and group activities, routines such as snack time, and all other aspects of the child's day at school, as well as of activities we think of as educational. This concept of curriculum has emerged from knowledge about educational practice, theory, and research and is documented at length in the professional literature (see Seefeldt, 1986).

It is also important to establish continuity between kindergarten and first grade. If the kindergarten program is developmentally appropriate and the first grade based on a didactic approach, children will be in for a shock and any developmental gains from kindergarten may be lost shortly after children are confronted with an inappropriate first grade curriculum. Primary teachers may need additional support and in-service work to learn more about recent research and theory on how young children learn. Above all, they need encouragement and support for themselves teaching in a developmentally appropriate way.

## Kindergarten as preparation for elementary school

Kindergarten is currently viewed by some educators as the time to get children ready for first grade—as a boot camp, prep school, preacademic or even academic program, or as the last year before children really settle down to the hard work of the elementary school, so you have to train them to the ways of the higher grades. This type of kindergarten is characterized

by heavy reliance on worksheets, workbooks, and total-class, teacher-directed lessons, with short free choice play periods for openers and as a reward ("after you finish your work"). Children must work silently and compete for grades. Play is not understood to be a major vehicle through which children learn and a provider of take-off points from which teachers well trained in the method teach.

Kindergartens that stress academic development through worksheets; many total-class, teacher-instructed activities; and reward and punishment approaches to discipline are not based on current theory or research in the field of early childhood education, child development, or developmental psychology; they are based on behaviorist theory. They have appeared since the late 1950s and are not the traditional American model.

Teachers tend to teach in the way they were taught and use the materials that are readily available in the school. These teachers may or may not have taken a child development course or two, but many of them have developed neither an *early childhood* philosophy of education nor a real, personal philosophy about educating young children that guides and holds together what they do in their kindergartens. Therefore, they are very susceptible to outside pressures.

Teachers using this "instructional" approach ("presenting lessons" with "learning objectives," asking questions that have "right" answers) usually are making a great effort to meet the academic and behavioral demands for children set by the parents, principal, school boards, and first grade teachers in the school, and by school-system decision makers beyond the school. Teachers strive to get the children's test scores up, to achieve the system's goals for kindergarten, and to get children ready for first grade. Teaching by rote and teaching to the test are common practices.

Teachers in these programs often have discipline problems with the children, and they tend to react with old-fashioned remedies such as writing children's names on the board, denying recess, or bribing children with rewards such as stickers or cookies.

Some programs like this have been called pressure cookers for young children because of their stringent expectations that young children can and will act and think like older elementary children (see Elkind, 1981; Seefeldt, 1985).

Programs that for the most part fit this description have lost sight of the child. Yet they abound in this country. Interestingly, they have never been subjected to the scrutiny of research. We anticipate that our review of research on curricula that have been more formally defined will give a fuller perspective on the types of teaching methods that have positive, long-term effects for young children.

*Four-, 5-, and 6-year-olds are in the "want to learn" mode.*

At the same time, of course, we must be cautious about overgeneralizing from the research reviewed later in this chapter. Only with more comprehensive, long-term studies can we fully document the benefits and limitations of any teaching practices. Meanwhile, we must rely on the directions already revealed and on our understanding of how children learn during their early years to make decisions about the most appropriate kindergarten curriculum.

Many school systems have developed very specific goals for kindergarten children. Typically, these goals make statements such as: *Children will learn to count to 10* (or 20 or 100); *children will be able to throw and catch a ball.* Although these goals may be realistic expectations for kindergarten children, their specificity is reminiscent of the practice of teaching for the test, and, as we have already seen, teaching for the test misses a lot of what children are, and should be, learning. Test-oriented teaching limits what children learn.

When the goals are so specific, the tendency is for teachers to instruct everyone with the same material, usually by rote, with worksheets and through lots of practice. This seems to be efficient and is the traditional approach to *elementary* education. Such is not the stuff of a good kindergarten, though, because it ignores what we know through nearly 100 years of expert practice and research about how children learn best—through hands-on, active involvement with real things. In fact, the traditional method may not be the best approach to elementary education, either.

## Kindergarten as development of the whole child

Other educators, concerned with continuing lifelong development and learning from infancy onward, see the kindergarten year valuable for itself, and believe that everything should be done to ensure that children go on developing their love of learning, expanding their general knowledge base, their ability to get along, and their interest in reaching out to the world all through the kindergarten year.

Everything kindergarten children do in appropriate programs promotes learning, strengthens learning, and *is* learning in the broadest sense, although the content is not likely to be labeled with the traditional subject titles and the day will not be neatly divided into 20-minute periods. Young children's learning is more intertwined than that.

Children learn about anthropology, music, and science when they carefully stroke the fabric of an Indian sari worn by a child's mother as she plays

*Young children best learn the 3Rs when they are woven into play and projects.*

traditional music on the sitar. They learn about geometry and physics when they build with blocks. Their busy chatter, songs, fingerplays, drawing, list making, and silly rhymes are all intense explorations in ways to use language and reading, as is their enjoyment of sharing books in the classroom library, immersion in the stories their teacher reads them, participation in dictating ideas for the teacher to write on a chart or chalkboard, and pleasure in making and filling up their own individual books. Children learn about communications and government when they write a list of their choices and vote to name the new guinea pig. And they learn about science and nutrition when they prepare a delicious snack from the apples they picked at the orchard or purchased at the neighborhood market. All of this rich learning adds to the kindergartner's intellectual development, as does learning the alphabet letters and the sounds they make, recognizing numerals, relating the written word to the spoken word, developing comprehension of math concepts—tools that can be learned through play and projects. Workbooks and worksheets may sometimes be used to help children focus on a specific skill, *if necessary,* but are a minor part of the daily program.

In a traditional, developmentally appropriate kindergarten children learn mostly through *play* and through freely choosing and using a variety of learning centers all around the classroom, figuring out how things work, interacting with each other, trying out new roles, experimenting with their own ideas, building on their experiences, and solving real problems (Fein & Rivkin, 1986). Teachers prepare many projects in what we think of as "subjects" (science, language arts, math, social studies, early literacy, and so on), either by extending and expanding upon what children are playing and doing, or by following good curriculum guides that provide a wealth of lively learning activities. Projects integrate "subjects" as much as possible.

Traditional kindergarten curricula are rooted in child development theory and research. Aimed at supporting the integrated development of the whole child, these kindergarten programs became part of public education in 1874. Susan Blow, Elizabeth Peabody, Henry Barnard, and William Harris were pioneer developers of the kindergarten concept and its acceptance in this country. Patty Smith Hill, Lucy Sprague Mitchell, Caroline Pratt, and many others experimented, invented, researched, and, in the World War I era, shaped very effective programs to foster intellectual, democratic, emotional, social, and physical learning blended together. Their work strongly indicated that young children learn skills of all sorts best if the skills are taught as relevant to children who come upon the need for them while involved in play and projects such as carpentry or preparing for an outing to the farm.

This approach is closely related to the finest of the nursery school tradition. Whole-child programs are tailored to the individual children who enter them, in recognition that there is always a range of skills in any group, and that children learn best in a heterogeneous group because they learn so much from each other.

Learning is promoted through *free play*—hour or hour-and-a-half long periods every day when children select from a variety of interesting and varied activities in carefully prepared learning areas and learning centers and can interact with each other at will. Indoor and outdoor learning areas contain a wealth of materials: puzzles, paints, clay, sand, climbing structures, books, trucks, blocks, plants, animals, dress-up clothes, musical instruments, and cash registers, to name just a few. Areas where discovery science projects are set up and an adult asks astute questions and stimulates thinking as each child learns through trial and error, where children dictate stories to an adult who reads them aloud and teaches a few writing and reading skills if suitable, and where an array of appealing math games and adult suggestions encourage each child to try something new (to learn something new) also abound.

Children learn about the democratic process when they help determine what rules they need to get along together, make real choices, and accept responsibility for their own actions. These whole-child programs encourage children to solve problems by talking about them with the other people involved.

The depth of knowledge that young children develop in the traditional kindergarten is not always evident to those who are accustomed to seeing more tangible evidence of children's work such as worksheets. Instead, teachers and parents document children's continuity of physical, intellectual, social, and emotional develoment through observations and samples of children's artwork and early writing, for example.

Parents play a key role in these programs, either as staff or volunteers in the classroom or in a policymaking role. Teachers are trained in early childhood education. Groups are small, and two or more adults usually supervise each group. Each individual child's emotional and social development is of concern to teachers who are trained to observe and respond appropriately to children.

The basic Head Start program designed in 1964 by early childhood educators was, and continues 25 years later to be, the whole-child approach.

This approach to curriculum has evolved from the ideas of theorists including Froebel (1895), Piaget (1936/1952, 1950), Dewey (1938), Frank

*A variety of learning centers, free choices, and time to become involved are indicators of good programs.*

(Hartley, Frank, & Goldenson, 1952), and Erikson (1963) and the more recent work of Piagetian scholars, especially Kamii (1984). Some programs that might be included in this broad category are kindergarten, traditional nursery school and Head Start programs, and Bank Street's Developmental Interaction Approach (Biber, Shapiro, & Wickens, 1971). A strong background in early childhood education and child development provides teachers with the skills and information needed to implement a whole-child approach.

Goals for children in kindergartens focusing equally on all aspects of each children's development are based on what children are like at that age:

- Children will grow in their self-esteem, cultural identity, curiosity, independence, and individual strengths.
- Children will continue to develop a love of learning.
- Children will gain increasing control of their large and small muscles.
- Children will engage in interesting, appropriate experiences that integrate their social, emotional, intellectual, and physical development.
- Children will use written and spoken language in concrete, meaningful ways.
- Children will use mathematical concepts and mathematical symbols in concrete, meaningful ways.
- Children will continue to develop control of their own behavior through positive adult guidance.
- Children will become increasingly self-motivated, cooperative, and able to resolve problems among themselves with a minimum of adult direction.

For details about these basic kindergarten goals, you are referred to the position statements developed by professionals that are listed in this volume's bibliography. These position statements are based on the work of professionals including Biber (1984), Elkind (1981, 1986, 1987), Hymes (1968), Kamii (1984), Kamii and DeVries (1980), Katz and Chard (in press), Piaget (1936/1952, 1950), Rudolph and Cohen (1984), and Spodek (1986). For a more thorough review of the ideas influencing early childhood education, see Weber (1984).

## Curriculum comparisons: What does research suggest?

Individual kindergartens fall somewhere on a continuum from, at one end, those that stimulate and support balanced whole-child development and in which children are key activity planners to an exemplary degree to, at the other end, those that focus to an extreme degree on the didactic teaching of separate academic skills from packaged programs. Whole-child

*Abundant parent participation is a sign of a good program.*

curriculum includes all the usual academics and some commercial lessons. Separate skill curriculum includes some attention to children's emotional, social, and physical needs, and some nonpurchased learning activities. Many programs are somewhere between the two extremes. However, in their purest forms (and a great many such kindergartens *do* exist) programs at the two ends of the continuum bear little resemblance to each other because of the amount of time and emphasis placed on activities the philosophy of the curriculum features as priority and because of the different *sources* of the activities (children or teacher).

In contrast, most careful research on how 4- to 6-year-old children learn has not compared these two approaches characteristic of public school kindergartens in this country. Nor has curriculum research usually been done in public schools. Nonetheless, there is a growing body of very relevant research about children in the age group with which we are concerned here, and particularly with children from the socioeconomic group most difficult for teachers to effectively educate.

Studies of different types of curricula for young children have been possible primarily because the federal government sought to document the results of the early intervention programs introduced during the War on Poverty in the 1960s—Home Start, Head Start, and Follow Through (in which Head Start models were adapted to the early elementary grades). The number of research projects on the immense scale required to evaluate the effects—particularly long-term effects—of curriculum on all types of children is not great. Many studies were carried out with limited time and money, conducted on relatively small groups of children primarily from low-income Black families, and often reported only locally. Nevertheless, these studies have also revealed some interesting results, both short-term and long-term.

This review will be a selective one, designed to provide the information most needed by those making decisions about kindergarten curriculum in light of children's developmental needs. We have taken the utmost care to select the most rigorous studies and to look at the long-term effects on the lives of children.

**Program characteristics**

Wide variability between and within models makes it quite difficult to distinguish whether program strengths and weaknesses are caused by curriculum content, teaching strategies, specific activities or materials, support services, class size, or other factors.

The quality of the total program provided can influence the effects of the particular model. **Programs with more highly trained teachers and**

**close supervision by experts have been found to be more effective** (McKey et al., 1985). **Lower numbers of children in the classroom and more adults per child also result in more positive outcomes for children** (McKey et al., 1985; Stallings, 1975; Vopava & Royce, 1978).

A brief description of some of the salient features of three well-researched Head Start variations—Montessori, didactic, and cognitive developmental—follow. However, two important facts must be kept in mind:

1. Head Start has, since its inception in 1965, been a strongly whole-child program. It has heavily emphasized health assessment and services, nutrition, meaningful parent participation in a wide variety of forms, social services for children and their families, the development of positive self-esteem, social skills, and general education. Except for some pilot programs, Head Start does *not* use the Montessori, didactic, or cognitive developmental approaches.
2. Very few public school kindergartens use a Montessori curriculum. Many kindergartens use a didactic approach, but *not* many use the two thoroughly researched didactic models described in a moment—Bereiter-Engelmann (DISTAR) and DARCEE. Many kindergartens consider themselves cognitive developmental programs, but *not* many use the thoroughly researched cognitive developmental model described in the next few pages, the High/Scope program.

It is important to remember while reading this review of research that it is valuable for kindergarten decision makers but does not describe today's kindergartens.

### Montessori

The Montessori system was originally developed by physician Maria Montessori in Italy in 1906 to use with low-income, mentally retarded children. Montessori's techniques soon gained international recognition and now include programs for nursery school through the elementary grades (Montessori, 1964).

Key to the Montessori program are the specially prepared manipulative materials that children use independently. Each item is used in a prescribed sequence, and children must master one task before proceeding to the next level. Many of these hands-on materials (size-graded cylinders, for example) are now used in a wide diversity of programs for young children, as is the child-sized furniture that Dr. Montessori introduced.

The Montessori program is characterized by respect for children, a novel idea when it was introduced, and a strong belief in the value of self-reliance.

*Head Start has always been a strongly whole-child program, hence its success.*

This method of teaching is well known for a commitment to the concept that "play is the child's work." Children engage in life tasks such as fastening buttons and polishing silver, and many materials are designed to help children use reading and mathematics.

The original Montessori program is usually modified and now often includes music, art, dramatic play, and other activities in which children interact with each other. The primary focus remains on intellectual development and the structured use of the manipulative materials, however.

Teachers of the Montessori method receive special training in the principles of Montessori education.

Although the Montessori method was revived and spread in the 1960s, and was one of the special projects in Head Start, it has not yet become a significant influence in Head Start or public kindergarten.

**Didactic programs**

After Head Start was launched in the summer of 1965, several models to teach low-income children were developed based on a didactic approach using the emerging behavior modification principles of B. F. Skinner (see Skinner, 1965). In this approach, curriculum developers program instruction for the teacher and children, breaking down academic skills into small incremental steps of increasing difficulty. Teachers use verbal praise or token rewards (candy or stars, for example) for correct responses.

One of the most widely written-about of these types of didactic programs was the Bereiter-Engelmann (1966) model. This model centered on the use of teacher-directed drill with small groups of children in 20-minute lessons of reading, arithmetic, and language. It evolved into the didactic approach called the DISTAR model (Engelmann & Bruner, 1969), which is very similar in its reliance on direct, verbal, teacher-led question-and-answer sessions with small groups of children. Children are expected to respond to the teacher with one correct answer, and interaction with and among children is not encouraged. Workbooks are often used for practice. This method met with considerable disapproval among many prominent educators, including educators in Head Start, because it contrasted in so many ways with our long-standing knowledge about the whole child and how she learns.

The DARCEE (Demonstration and Research Center for Early Education) approach, although somewhat more flexible than the DISTAR model, is also highly teacher directed. It includes a broader range of manipulative materials and involves parents as teachers in their homes (Gray, Ramsey, & Klaus, 1982; Moore, 1977). DARCEE's emphasis is on "remediation of linguistic

***A substantial number of studies have confirmed the drawbacks of the use of didactic teaching strategies and the value of more flexible approaches to guide children's learning.***

and conceptual deficiencies and the development of attitudes related to academic achievement (e.g., delayed gratification). Formal instruction in language is a major part of the program" (Powell, 1986, p. 61).

Neither of these didactic approaches was ever implemented extensively, but much was written about them, and many kindergartens use some of these structured, teacher-dominated methods of teaching.

### Cognitive developmental

A third model that grew out of Head Start was developed by David Weikart and his colleagues. Formally called the High/Scope Cognitively Oriented Preschool Curriculum (Hohmann, Banet, & Weikart, 1979), this program continues to receive national attention because of the long-term research that has been done on its effects (Berrueta-Clement, Schweinhart, Barnett, Epstein, & Weikart, 1984; Schweinhart, Weikart, & Larner, 1986). For simplicity, we will call this the High/Scope model.

Predicated on the work of Piaget, this highly refined curriculum entails a cooperative approach in which children and teachers work together to plan hands-on activities and carry them out. This approach emphasizes children's intellectual and social development and most of the teaching strategies have been carried over from the whole-child approach. Home visits are an integral part of this method.

Intensive training in this system is offered to those already qualified to teach young children.

### Cognitive/language development

IQ and other achievement tests have typically been used as indicators of children's cognitive growth, although we know testing of young children is not very valid or reliable. School performance, and ability to skillfully negotiate real-life problems as an adult, may be far more useful indicators of the true value of any educational program. These are much more difficult to measure and compare, of course.

Even before the advent of early intervention programs, research on preschool and kindergarten suggested that "language and intellectual development may be influenced, apparently, particularly if the home or out-of-school environment of the child is meager in stimulating qualities" (Sears & Dowley, 1963, p. 850). The synthesis of research from Head Start, Follow Through, and similar programs serving low-income children has upheld this conclusion.

***Changes in IQ scores.*** Low-income children tend to gain in IQ scores as a result of enrollment in an early childhood program. Gains are usually most rapid and dramatic for children in didactic programs (Bissell, 1972;

*Home visits and child planning are two important aspects of a good program for young children.*

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Gray, Ramsey, & Klaus, 1982; McKey et al., 1985; Miller & Dyer, 1975; Schweinhart et al., 1986; Smith, 1974; Weisberg, 1974).

These early gains generally last into the primary grades and then drop off, although IQ gains have been maintained for a DARCEE group through fourth grade (Stevens, 1982) and some Montessori groups into adolescence (Miller, 1979; Miller & Bizzell, 1983). The IQ losses for children who had been in didactic programs were greater, as the children matured, than for children in more flexible groups (Miller & Bizzell, 1983), and girls dropped far more points than boys (Miller & Dyer, 1975).

***Special education and grade retention.*** Of perhaps greater importance than IQ scores is the fact that *fewer children from early intervention programs are assigned to special education classes, and fewer of these children are held back in school, when compared to children without the benefit of early education* (Berrueta-Clement et al., 1984; Consortium for Longitudinal Studies, 1979, 1983; Gersten & Carnine, 1981; Goodrich & St. Pierre, 1979; Gray, Ramsey, & Klaus, 1982; Lazar, Darlington, Murray, Royce, & Snipper, 1982; Lazar, Hubbell, Murray, Rosche, & Royce, 1977; Moore, 1978).

Low-income children formerly in Montessori preschool programs, when compared to children in four other types of curriculum models, were less likely to be held back, and more likely to succeed in school and to graduate from high school (Karnes, Shwedel, & Williams, 1983). Similar effects have been found for children in High/Scope programs (Berrueta-Clement et al., 1984).

The implications of these findings are significant for both children and school systems because, as we have already seen, children's self-esteem can be greatly harmed by labeling or kindergarten failure. Also, both retention and special education classes are much more expensive when the long-term expenses to educate children are considered.

***Length of early school experience.*** In addition, one researcher found that *the earlier the child enrolled in the intervention program, the greater the impact on children's intellectual, social, and emotional functioning* (Beller, 1973, 1983). For example, low-income children who first entered group programs in nursery school tended to have better grades in arithmetic, reading, spelling, and social studies, and higher test scores than children who first entered school in kindergarten. Children from Montessori preschool programs, especially boys, appear to do better in the primary grades when the Montessori method is continued in elementary school than when they enroll in other types of programs (Chattin-McNichols, 1981; Powell, 1986; Sciarra & Dorsey, 1974).

***Positive interactions with children are most likely to build their sense of competence and self-esteem. Children do live up—or down—to our expectations.***

***Abilities to solve problems, both personal and social, are developed throughout the early years. Early childrearing and school experiences clearly affect adolescent and therefore most likely adult behavior.***

*Fewer children from early education programs are placed in special education or retained in grade.*

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Although low-income children's IQ performance gains declined over time, those with early education tended to have more positive attitudes about school (Lazar et al., 1977; Schweinhart & Weikart, 1980). These findings point to the value of good early childhood programs, including kindergartens, in enabling children to have the positive attitudes and necessary skills to be successful in overall school performance and perhaps in all areas of their lives.

***Intellectual functioning.*** When types of programs are compared, some very important differences emerge regarding children's intellectual development. Two factors having an important effect on children's performance are their levels of independent initiative (motivation) and task persistence (Beller, 1973, 1983).

Children in more flexible Head Start and other preschool programs have consistently been shown to be more persistent at independent tasks than children in didactic programs (Fagot, 1973; Huston-Stein, Friedrich-Cofer, & Susman, 1977; Miller & Dyer, 1975). Similarly, in a far-reaching study of Follow Through classrooms in 36 different locations, Stallings (1975) found that children were more likely to persist on tasks when they received more adult attention and a variety of feedback about their work, both characteristics of flexible programs.

Didactic models liberally use rewards and punishments. The enticement of a reward, and at the same time the fear of criticism and punishment, discourages children from trying more difficult tasks (Cannella, 1986; Jensen & Moore, 1977) and can reduce children's intrinsic motivation (Gottfried, 1983; Miller & Dyer, 1975), thus limiting children's chances to cope successfully with challenges.

Structured teaching methods may have other negative consequences as well. Research evidence indicates that *"highly didactic programs prepare children to function well in structured lesson situations, but may reduce cognitive flexibility and problem-solving initiative* [emphasis added]" (Moore, 1977, p. 58).

A substantial number of studies have confirmed the drawbacks of the use of didactic teaching strategies (rewards and punishments and structured lessons) and the value of more flexible approaches (where students choose from several hands-on activities, and teachers encourage questions and discussion, and smile and laugh more often) to guide children's learning. Just a few of the most relevant studies will be cited here.

In the Planned Variation Follow Through classrooms, elementary children in the groups taught in a flexible manner were more willing to work independently, attributed their school success to their own efforts, and

even tended to have fewer absences (Stallings, 1975). Similarly, primary children from flexible classrooms were better motivated (Schweinhart & Weikart, 1980).

Children in flexible programs tended to keep on learning during the summer, whereas those in didactic classrooms were less likely to continue to progress outside the classroom (Soar & Soar, 1969). Simply put, "One of the things that a child can learn in a flexible classroom is that learning can take place in the absence of a teacher and a lesson plan" (Moore, 1977, p. 59).

***Long-term cognitive abilities.*** Other key findings deal with the long-term cognitive consequences of different curricula.

In one follow-up study through eighth grade, boys who had been in nondidactic preschool programs, especially Montessori, were still as much as a year ahead in reading and math (Miller & Bizzell, 1983). *Children enrolled in the more flexible types of programs have continued into their teens to have higher achievements than their peers in areas such as language, reading, and arithmetic* (Schweinhart & Weikart, 1980).

On the other hand, teenagers who had been in a didactic preschool group scored lowest in nearly all measures of ability to solve real-world problems and cope with the cognitive demands of adult life such as using skills in consumer economics, health, and computation (Schweinhart et al., 1986). This finding appears to be related to the fact that children in didactic programs have fewer chances to think for themselves or to experience the logical and natural consequences of their decisions and actions.

Children from High/Scope (Berrueta-Clement et al., 1984) and Montessori (Karnes et al., 1983) models have been found to be more likely to graduate from high school and go on for additional training than their peers. Both of these factors are clearly related to future employability and potential for self-sufficiency.

The long-term effects of didactic models are less definitive. Lower high school dropout rates were reported for children who had been in a didactic Follow Through program (Gersten & Carnine, 1981). Didactic models may have different effects for males and females: Only the females enrolled in DARCEE were more likely to complete high school and to have higher career aspirations than others who had not attended preschool.

***Influence of family income.*** Little work has been done to document the effects of curriculum on children from middle- and high-income groups. One curriculum comparison study indicated that curriculum-specific gains for middle-class children in both didactic and more flexible programs tend

to level off by the end of the first grade, rather than fade dramatically as they sometimes do for low-income children (Singer, 1973).

### Social/emotional development

The positive (or negative) effects of early childhood education on children's social and emotional development can persist into adolescence and most likely beyond (Beller, 1973, 1983; Berrueta-Clement et al., 1984; Schweinhart & Weikart, 1980; Schweinhart et al., 1986). *All programs affect children's social and emotional development, even if such effects are not a planned part of the curriculum.* This aspect of development is much more difficult to measure, but several studies have shed some light on the effects of different practices.

***Motivation.*** As we have already seen with relation to school achievement, children's motivation and persistence seem to be fostered in programs that are more flexible in nature (see Cannella, 1986; Gottfried, 1983).

***Self-esteem.*** Self-esteem is a key factor in determining whether children will fulfill their potential—children who believe in their strengths and abilities to cope with difficulties will indeed succeed or at least learn from failure and carry on undaunted. Consequently, it is important to note the research documenting the effects of different practices on children's self-esteem.

In one study, *elementary children in more flexible groups exhibited higher self-esteem and problem-solving abilities than children in more didactic groups* (Fry & Addington, 1984). Self-esteem of first graders has been found to be very dependent on adult attention and interaction (Stallings, 1975). Abundant evidence in the literature on childrearing styles supports the notion that positive interactions with children are most likely to build their sense of competence and self-esteem. Children do live up—or down—to our expectations.

***Social problem solving.*** At least two studies have documented that children who attend early childhood programs begin kindergarten with greater social competency, but that these differences soon fade (Larsen & Draper, 1984; McKey et al., 1985), perhaps because the other children in the group learn social problem solving skills in kindergarten.

Children in didactic classrooms have been found to engage in less prosocial behavior with other children in the group and in less imaginative play (Huston-Stein et al., 1977). In contrast, children in flexible programs had higher scores in social problem solving (Fry & Addington, 1984).

Montessori programs seem to be somewhat less effective in promoting verbal-social participation than other more flexible programs (Chattin-McNichols, 1981), perhaps because of the Montessori emphasis on individual activities.

Abilities to solve problems, both personal and social, develop throughout the early years. Early childrearing and school experiences, as we shall see, clearly affect adolescent and therefore most likely adult behavior.

***Delinquency.*** Several studies have documented higher levels of adolescent coping difficulties (on various indicators including cheating, drug abuse, pregnancy, crime, running away from home, and/or dropping out of high school) for low-income youth who were not enrolled in preschool programs (Berrueta-Clement et al., 1984; Gray et al., 1982; Lally, Mangione, & Honig, 1987; Lazar et al., 1977; Schweinhart et al., 1986). The value of early childhood programs seems especially evident for girls (Gray et al., 1982; Lally et al., 1987).

Findings from the High/Scope research are quite detailed with regard to juvenile behaviors. The adolescents who had been enrolled in the DISTAR program committed twice as many delinquent acts as the other groups (High/Scope and a traditional nursery school). Children from this didactic program were more likely to be drug abusers, to have poor family relations, and to be runaways. They were less likely to participate in sports or other school extracurricular activities, to hold jobs, or to plan further education. In sum, *adolescents who had been in the didactic preschool program had more difficulty coping with school and their personal lives than teens who had been in more flexible preschool programs.*

**Physical development**

Although young children are very active and grow at rapid rates, little has been done in recent decades to document the effects of early childhood programs on children's physical development. (However, this is where child development research began early in this century: Arnold Gesell, and progressive educators such as those working through Lucy Sprague Mitchell's Bureau of Educational Experiments and the women at Walden School, kept meticulous records of each child's physical development.) In reviewing several studies on Montessori groups, Chattin-McNichols (1981) concluded that these programs seem to promote visual-motor coordination and visual-perceptual ability.

All Head Start programs must meet standards for health services, including medical, dental, mental health, and nutrition. By providing nutritious breakfasts, snacks, and lunches, for example, Head Start clearly

***Flexible curriculum models, based on the principles of child development, are more likely to produce long-term gains in general intellectual growth, social and emotional skills, and life-coping abilities.***

promotes children's health. Federal programs have enabled elementary schools to continue a similar service by providing breakfast and lunches to low-income children.

Many early childhood programs serve children with special needs, including those with physical handicaps such as vision, hearing, and mobility problems. Individual plans are developed in conjunction with specialists to foster each child's development. As we have seen, early identification of disabilities makes it possible to take steps to promote development.

* * *

What do these diverse results mean for those responsible for planning and carrying out a kindergarten curriculum? First, let us try to summarize even further some trends that emerge from the research on early education programs:

1. Children in didactic programs usually make the most dramatic gains in academic test scores. Gains for children in didactic and flexible programs generally level out in the primary grades. Drops in IQ scores are most dramatic for low-income children in didactic programs.

*One of the things that a child can learn in a flexible classroom is that learning can take place in the absence of a teacher and a lesson plan.*

---

2. Flexible curriculum models, based on the principles of child development, are more likely to produce long-term gains in general intellectual growth, social and emotional skills, and life-coping abilities.

## Directions for policy

When we consider the research and child development theory as a whole, we can identify several components of an appropriate kindergarten curriculum. These components can be included in all kindergarten curriculum policies if these guidelines are followed.

***Directly address all areas of children's development in curriculum goals.*** Give intellectual, social, emotional, and physical development balanced attention because they are interrelated in young children's learning. Skills should be broadly defined rather than limited to those that are easy to measure. Programs that focus on one area of development, common in didactic approaches that stress academic gains, do so at the expense of other areas.

***Tailor the curriculum for each kindergarten class to the range of children's ages and developmental levels.*** Keep expectations for behavior and progress reasonable and base them on knowledge about child development and children's backgrounds. Expect and welcome individual and group differences. Identify both short- and long-term goals and use appropriate practices and materials to help each child reach those goals.

***Base daily teaching practices on appropriate curriculum goals.*** Choose teaching practices, child guidance (discipline) methods, the setup of the room, and materials and activities for their contributions to children's integrated learning through planned play experiences. We will elaborate upon the common components of didactic and flexible programs, such as those cited in this research, because of the confusion surrounding the issue of what really is developmentally appropriate practice in programs for young children (see *What's inappropriate* and *What's appropriate* on pp. 58–60). For more details about contrasts between appropriate and inappropriate practice for young children, read NAEYC's position statement on the topic (Bredekamp, 1987).

***Encourage parents to participate in the classroom.*** Welcome parents as partners in their children's education. Encourage parents to interact with the children, share their skills and interests with children, and observe whenever they wish. See families as a rich resource for children's learning about people and the world around them.

***Base decisions on professional knowledge.*** Respond to demands by parents, staff, or school boards for more stringent academic curricula, old-fashioned teaching methods or discipline systems, and other inappropriate measures with an understanding of the issues involved. Provide *readable* materials describing applicable research and theory that document the values of more appropriate practice at general parent meetings and to those who inquire about school policies and practice. Encourage parents and skeptical staff members to visit appropriate programs so they can see for themselves how much children learn in high-quality classrooms. Ensure that school boards are well-informed about early childhood education so that they can base the decisions they make on what is best for the children's long-term development, which includes academic achievement.

***Measure children's progress in many different ways.*** Standardized tests provide an incomplete picture of the broad range of children's learning. Instead, teacher and parent observations, samples of children's work, children's self-reports, special education placements, grade retentions, delinquency problems, and even graduation, employment, and post-secondary education enrollment rates to help determine whether children and staff in a school system are succeeding in their efforts to meet appropriate short- and long-term goals.

A school system that allows its curriculum to be driven solely by short-term improvements in test scores will find itself condemned to spending its time on a treadmill of curriculum tinkering, constantly trading gains in one area of children's development for losses in other areas.

***Assign funding priorities to small class sizes, low adult-child ratios, hiring teachers with degrees in early childhood education, supervision of classrooms, and in-service training.*** Unless good teachers have ample opportunities to interact positively and personally with each child, no curriculum can work optimally. Supervision and in-service training are needed to keep teachers and principals up-to-date on the latest information about how young children grow and learn best.

* * *

We will now move on to a discussion of just how much time is needed to help children take full advantage of the learning opportunities offered in an appropriate kindergarten.

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# What's inappropriate

**Inappropriate practices**

- Most activities are very structured, teacher-led, and directed toward large groups of children.
- Children are expected to sit quietly and listen to or watch the teacher (demonstrate a science experiment, for example).
- Children are drilled in the alphabet, letter sounds, or how to count—skills are taught in isolated segments.
- Bribes (such as food, stickers, or special activities) are used to get children to pay attention and learn.
- Children spend most of their day indoors and sitting.
- Schools purchase or teachers prepare most lessons and children complete them (children color in an already drawn picture, paste shapes cut out by an adult, draw lines between two columns).
- All children are required to participate in all activities.

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**Inappropriate discipline methods**

- Focus is on negative rules established by an adult (don't run, don't hit, don't talk out of turn). The adult is primarily concerned about controlling the children.
- The teacher humiliates children (names on the board, children berated in front of their friends).
- The teacher relies on rewards and punishments to get children to behave. Denial of recess, detention, or loss of library privileges are common punishments.
- There are unrealistically high expectations for kindergarten children (always be quiet, walk in a straight line in the hallway, follow directions immediately, don't talk unless you raise your hand).
- The adult solves problems for the children.
- The principal and/or parents are used as a threat when a problem arises.

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**Inappropriate environments**

- The teacher's desk is in a prominent place with children's desks facing it.
- Emphasis is on neatness and teacher control; therefore, most materials are out of children's reach.

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**Inappropriate materials and activities**

- Worksheets, workbooks, dittos, and flash cards are used frequently.
- Children have only short or infrequent opportunities to use large muscles outdoors.
- There are frequent competitive learning situations (everything is graded, good work only is put on the bulletin board) and competitive games.
- The teacher fits in music and art only when specialists are scheduled.

# *What's appropriate*

## Appropriate practices

- Activities are planned so the children participate to the fullest extent possible, most often individually or in small groups, talking and helping each other, while the teacher is available to answer questions or stimulate children's thinking as they work on their own.
- Teachers recognize and use the teachable moment to integrate children's learning whenever possible (an unplanned event captures children's interest, such as the arrival of a tree-trimming crew, so the children go outdoors to watch, talk about why the trees are being trimmed, try to figure out what will happen to the wood chips, listen to the sounds of the equipment, smell the freshly cut wood, and go back indoors to dictate or write about the experience).
- Children and adults move about the classroom from learning center to learning center as they complete activities and talk with each other in informal but respectful ways. Children are motivated to learn because what they are doing is so interesting and builds upon their natural curiosity.
- All areas of learning are integrated in meaningful, natural ways so children can see how useful their emerging skills are (children make a shopping list for a cooking project, distribute cups to each child for snacks, and care for plants or small animals, keeping charts and records that use newly developing math, writing, and reading skills).
- Children are given a number of educational options as to activities, and their choices are respected within the limits of space.

## Appropriate discipline methods

- A few positive rules are set by the group democratically (children formulate rules they need to get along well together). Children are expected to gain increasing control of their own behavior. Rules are realistic and designed to promote cooperation and respect. Teachers accept that it is natural for kindergarten children to be noisy, to move about a lot, to express their enthusiasm vigorously and to want to finish their projects before moving on to something else.
- Teachers promote respect for each other and are sensitive to children's desire to please adults. Teachers recognize that kindergarten children take criticism very seriously and personally, so they refrain from reprimanding children in front of others and never use labels such as *bad* or *naughty*. Instead, teachers talk with individuals about what happened and try to help the child come up with better ways to handle the situation or similar events.
- Teachers recognize the critical learning value of recess, time in the library, and other opportunities for children to get fresh air, move about, and learn from other experiences outside the classroom. Children are never denied these activities as punishments.

# What's appropriate

- There is an emphasis on promoting children's intrinsic motivation, self-esteem, and self-control. Children want to learn. They will learn best when they feel good about themselves. Children take responsibility for themselves by accepting the natural and logical consequences of their behaviors.
- Parents and principals are welcome participants or visitors at any time. Children look to them for support and feel comfortable in their presence.

**Appropriate environments**

- Children can stand, sit on the floor, or work at tables depending on the child's preferences.
- Materials are on open shelves so children can select what they need.
- There is a wide variety of small- and large-muscle options from which children may choose, indoors and outdoors.

**Appropriate materials and activities**

- There are abundant choices for real, hands-on activities (clay, water, sand, paint, blocks, trucks, riding vehicles, climbing apparatus, objects from nature, musical instruments, games, recordings, dramatic play props).
- Activities vary: active/quiet, large muscle/small muscle, planned/spontaneous, brief/sustained, small group/individual/occasional large group.
- A solid balance of all areas of learning is offered in an integrated way.

# Chapter 4

## How much time is needed to offer an appropriate curriculum?

SCHOOL BOARDS in many communities are struggling with the issue of whether to provide 5-day-a-week full-day kindergarten. In local discussions, these questions often arise:

- What is the purpose of extending the day from half-day to full-school-day length? (If children are in kindergarten three full days a week, what is the purpose of making it five full days a week?)
- How are program costs affected: qualified staff, ample space, materials, transportation, food service?
- How will children be cared for before and after school, regardless of the length of the *school* day itself?
- What are parents' needs and expectations?
- When will teachers plan and prepare?

We will center our discussion on how kindergarten day length can best serve children. Budgets, parents' needs and preferences, teachers' expert judgments, administrative considerations, and other adult concerns are important, but too often *children's* needs get lost amidst these other issues.

It would be unfortunate to expand *in*appropriate half-day programs into full-day kindergartens—such a move could only cause harm to children by *taking away* their time, often not available in school, for valuable play, large muscle activity, choices, friendships, and one-to-one relationship with adults. The purpose of kindergarten is not to overload children with academics more appropriate for the later elementary grades. School systems working to improve the appropriateness of their kindergarten programs should continue their efforts in that direction. *Emphasis in planning should be on meeting all goals for appropriate programs, though of course the length of the kindergarten day must also be considered and determined.* Time, energy, and resources should first be directed toward providing the best possible kindergarten year for children; length of day appears to be of secondary importance to other variables included in NAEYC's position statements on developmentally appropriate practice in programs serving 4- and 5-year-olds and the primary grades (Bredekamp, 1987).

*Few states fund full-day programs.*

## Diversity of program length

As is to be expected, the length of the kindergarten day varies across the United States, as do other aspects of kindergarten (Educational Research Service, 1986a). The most common variations are:

- half day every day
- extended beyond half day, but not as long as a full elementary school day
- full day, meaning a full *school* day (which many employed parents do not see as a full day!)
- half day followed by some type of in-school child care program
- full school day followed by some type of in-school child care program
- full school day alternate days

Many schools continue to offer the *half-day every-day* approach to kindergarten. Quality in these programs, as in all programs, varies depending on the quality of the teachers and the goals set for the children. In some of these schools, teachers plan and prepare during the other half of the day; in others, each teacher has a second class of kindergartners in the afternoon.

Other schools want to offer a more comprehensive, multidisciplinary approach, especially for low-income children seen as in need of health screening, nutritious meals, and social services, so believe they need a longer day—extended an hour or so beyond half-day programs or even as long as a regular elementary school day. Parent involvement often plays a key role in these kindergartens. Many of them build on the favorable results shown for Head Start programs. Though funding for such *extended* or even *full-day* programs may come from local school budgets, more often it comes from special grants or parent fees. Only a few states fund full-day programs.

In some communities, kindergarten day length has been increased to a *full school day*, sometimes to try to improve opportunities for low-income children, sometimes because of parental pressure to provide more academics, and sometimes because the value *for children* of a longer school day has been demonstrated.

Ideally, this extra time is used to expand upon an already appropriate curriculum to offer additional appropriate activities to enrich the variety and depth of young children's experience. However, in some communities, "enrichment" programs may instead be a euphemism for encroaching on the first grade curriculum, including heavy reliance on worksheets, in a

misguided attempt to accelerate children's cognitive learning. Other programs, also seemingly unaware of the professional literature, simply repeat the morning's activities in the afternoon or extend the same activities to fill the time (Frey, 1979; Levinson & Lalor, 1986). Parents pick up the cost of most of these longer programs, whatever type they are.

One question that communities are asking is: Is a 6-hour day or *truly* full-day program (8 or 10 hours in length) critical to the well-being of children and their employed parents and therefore "a necessary modern-day extension of public schooling" (Hymes, 1987, p. 1)?

Some communities have responded to parent needs by *piggybacking a child care program onto the half-day kindergarten day* (see Olsen & Zigler, in press; Trotter, 1987), or onto the school-day kindergarten. These programs may be staffed by untrained personnel, leading to an uneven quality of experience for children that probably is not developmentally appropriate. They can be plagued with high staff turnover rates. Parent fees, often on a sliding scale depending on ability to pay, generally are used to fund such programs, which cost less than those staffed by trained personnel.

A few schools, especially those in rural areas, have simplified transportation schedules and costs by standardizing the school day length for all students, or by having kindergarten children attend *full days on alternate days*. Again, the quality of these programs varies depending on the teachers and other staff who carry them out and on the goals set.

Other systems, and especially private schools in urban areas, believe that an appropriate program for young children is the same whether it is called child care, kindergarten, enrichment, or any other name—teachers qualified in early childhood education (not elementary education, a different specialty) set up a carefully planned environment and use sound teaching practices to guide children's growth and development, including, of course, intellectual development and some introductory amount of academic learning (Fromberg, 1986; Katz, Raths, & Torres, 1987). Programs such as these help children make the most of their hours in kindergarten, whether the length of day is 2½ hours three times a week or 6 to 10 hours each day.

It appears that we have been asking the wrong question about the length of the kindergarten day. We do have to consider budget, parent, teacher, administrative, and other adult needs in setting kindergarten schedules, but we need to focus on the question, *how much time is needed for teachers to offer an appropriate curriculum?* We will keep this question in mind as we build on curriculum research by looking at investigations on variability in kindergarten day length.

*There appears to be no educational reason to select five half days a week over three full days a week or vice versa, so if kindergartners are to go to school*

## Comparison of the effects of kindergarten day length

As we have seen, it is difficult to assess child outcomes based solely on curriculum differences, even when those differences are quite distinct and the curricula are well defined in model projects, because there are so many other variables. In public kindergartens across our nation it is even more difficult because few are distinct "models," and there are probably even more "real-life" variables.

It is an even greater challenge to try to synthesize research on day length. The curricula vary so widely; test scores are often used to compare groups (and, as we have seen, test scores for young children are of questionable value); populations served by school districts are diverse and mobile; there are many individual differences between children; schedules are usually designed for administrative convenience and cost effectiveness; few programs are planned as true experiments so their results are informal analyses of dubious statistical value; parent involvement varies greatly; and teachers have varying levels of training, skills, experience, and preferences about scheduling (Glazer, 1985; Jalongo, 1986; Karweit, 1987; Olsen & Zigler, in press; Stinard, 1982).

### Comparisons of shorter day programs

Shorter time in kindergarten is generally offered in two ways—half-day every-day programs, or full-day alternate-day schedules. Most school systems that have chosen a full-day alternate-day arrangement have done so in an effort to save on transportation costs, such as fuel and drivers' salaries, and to simplify transportation schedules (Cleminshaw & Guidubaldi, 1979; Minnesota State Department of Education, 1972; Ulrey, Alexander, Bender, & Gillis, 1982).

In effect, children who attend kindergarten on alternate days spend as much time in the classroom as those who attend half days, yet transportation costs are reduced by 50% because fewer bus routes are needed (Ulrey et al., 1982).

Studies of these shorter day programs have primarily looked at student test scores and staff perceptions. Most of the studies on full-day alternate-day programs found that this arrangement was at least as effective as half-day every-day kindergarten attendance (Cleminshaw & Guidubaldi, 1979; Gornowich, Volker, & Landry, 1979; Gullo & Clements, 1984; Minnesota State Department of Education, 1972; Mouw, 1976; Schulz, 1982; Ulrey et al., 1982); only one study (Tephly, 1982) reported conflicting findings.

*part-time, details of the decision can be based on other factors.*

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Gullo and Clements (1984) designed their study to control for possible developmental differences among children when they entered kindergarten and for differences among teachers, curriculum, and the total time children spent in school. They found no significant differences between children in half-day every-day and full-day alternate-day programs when academic achievement, classroom social behavior, and time spent in school were compared. They conclude that "school districts can consider other factors such as socioeconomic status, financial situation, and teacher and community attitudes and needs in choosing a kindergarten schedule" (p. 56).

**Comparisons between shorter and longer day programs**

As we have seen, longer day programs are offered for a variety of reasons and the curriculum may or may not be appropriate for the ages of the children, so it is difficult to compare programs. In addition, most of the research looks only at short-term effects, rather than at the more valuable long-term benefits for children.

Four studies looked only at extended-day programs, one of which lasted just 3 months. Children's test scores improved by the end of the program in all four groups (Alper & Wright, 1979; Anderson, 1983; Slaughter & Powers, 1983; Winter & Klein, 1970).

Research indicates that children in longer day programs make greater test-score gains by the end of kindergarten than children who attend for fewer hours (Adcock, 1980; Anderson, 1983; Carapella & Loveridge, 1978; Harman, 1982; Jarvis & Molnar, 1983; Oliver, 1980; Terens, 1984; Warjanka, 1982).

Results of long-term studies are less conclusive because there have been so few of these studies. Some researchers have found that all-day kindergarten children's test-score gains were maintained at least through the primary years and sometimes into eighth grade (Derosia, 1980; Humphrey, 1983; Nieman & Gastright, 1981).

Parent and teacher attitudes also seem to have been more favorable toward the full-day programs (Levinson & Lalor, 1986; McClinton & Topping, 1981).

> Children who attend full-day kindergarten, their parents, and their primary school teachers have positive attitudes about the program. These children when compared to children who attend half-day kindergarten, tend to have higher academic and conduct marks on their report cards, a lower rate of retention in a grade, [and] higher standardized achievement test scores . . . . (Humphrey, 1983, p. 19)

***Only after the goals for appropriate programs have been met should the length of the kindergarten day be reconsidered.***

Parent and teacher attitudes greatly affect children's self-esteem and performance in school. Such intangible benefits might be more lasting than test scores, similar to the effect we saw in the curriculum comparisons in Chapter 3 where gains in social/emotional development appeared to last at least through adolescence.

Full-day didactic programs seemed to have the most dramatic increase in test results for low-income children (Lysiak & Evans, 1976; Oliver, 1980). As we saw in Chapter 3, however, the results gained from this approach tend to decline rapidly during the primary years. Children's test scores generally have leveled off in the primary grades (Evans & Marken, 1984; Hatcher & Schmidt, 1980; Johnson, 1974). However, in one of these studies, about twice as many children in full-day classes were referred to special education groups (Evans & Marken, 1984). The researchers speculated that the teachers were better able to evaluate children's needs in the full-day program. Another possible interpretation is that academic expectations were so high for so many hours a day that many children were not able to manage and so were referred to special classes.

In an analysis of programs in the Chicago schools, researchers concluded that class size, not day length, was the most important factor in determining how well children do in kindergarten (Chicago Public Schools, 1984). Many studies on other early childhood programs have also found that group size—specifically, the adult-child ratio in the actual working group—is an important indicator of quality (Clarke-Stewart, 1987; Kontos & Fiene, 1987; Ruopp, Travers, Glantz, & Coelen, 1979). This is why early childhood education professional associations recommend that standard-size kindergartens have a full-time trained aide in addition to a teacher.

The variability in quality of research, program type, parent involvement, measures of gains, program purpose, and many other factors makes it nearly impossible to generalize from these studies, so we must again rely on what we know about child development and some of the other issues related to the length of the day before we can propose some guidelines for decision makers.

## Related issues

A brief discussion of some of the other issues, not necessarily subject to research but which clearly play an important part in decision-making processes, will give a fuller understanding of the complexity of considerations regarding the length of the kindergarten day. These issues typically play a strong role in decisions regarding day length. Let us review some of the other strengths and weaknesses of part- and full-day kindergarten programs.

### Goals for kindergarten

First, as indicated at the beginning of this chapter, schools need to carefully examine their purpose for kindergarten and must determine what their goals for a longer or shorter kindergarten day are. Test scores are an incomplete evaluation of a person, as well as inaccurate and fleeting, so other measures are needed to more fully decipher whether the school's goals for kindergarten children are being met. These observations can also reveal whether the longer day has any unanticipated benefits for children.

In an appropriate program, it is safe to assume, when children spend more hours with trained teachers and trained paraprofessional aides the chances are increased that children's development will be fostered. Learning cannot be rushed, but it can be stimulated through the provision, extension, and expansion of play and projects children find meaningful, thus motivating.

### Other effects on children

How do children feel about all-day kindergarten? Now that child care is so common, we know that young children can thrive in appropriate programs for as many as 10 hours a day. For those who have been accustomed to a longer preschool program day, a half-day or even full-school-day kindergarten may seem disappointingly brief. Friendships and interests have more time to blossom when children spend more time together exploring their ideas and playing out their experiences with each other.

A good kindergarten program takes time. Children need time to build intricate structures with blocks, cook healthy foods, create increasingly elaborate art projects, and play grocery store, post office, or other themes, through which they learn many literacy and math concepts and skills, as well as much else. If children run out of time to finish a project in the morning, they can complete it that afternoon without having lost continuity. Meals; naps (or at least quiet rest times); plenty of time to play indoors and out; and time for each child to work with a teacher in areas of special interest or special need, be they academic, intellectual, physical, emotional, or social; and other hallmarks of good programs easily make it possible for children to profitably spend more than 2 or 3 hours together.

Children are able to spend much longer days (at 2, 3, and 4 years of age) in good early childhood programs *because the schedule is adapted to their needs.* Children unaccustomed to a busy day with many other people may need some additional rest time during the first few days of school, but most will adapt their energy level within a few days. Children benefit most from a balanced day of active and quiet activities.

## *How do children and parents feel about length of day?*

Children's safety is always a concern. Children who attend school during the same hours as their older siblings or friends will have the advantage of crossing guards and older children to help escort them to and from school. In fact, for children who ride buses in rural areas or across town, a whole day in school may mean that for the first time they spend more time in the program than they do commuting to and from the school.

Some children may be intimidated by older children in the cafeteria, on the bus, or as they walk home. Schools need to consider the safety and comfort of younger children when scheduling and staffing services where children of different ages come into contact with each other.

Not *all* children's situations are the same. There are 4-, 5-, and 6-year-olds who can definitely benefit from kindergarten, yet not from a full day every day; that would be too stressful for them, thus counterproductive. By making these particular children endure too long a day, we are teaching them to dislike school. When we try to arrange identically for all children without regard to their level of maturity, special needs of a wide variety, their parents' ideas of what is best, and the types of experiences available (or not) at home, we are likely to *fail* to do what would be optimal for large numbers of individuals. Ideally, both schools and parents will be able to have a *choice* about length of day, because school districts will make available half-day, school-day, and extended-day (till 6 P.M. or so) programs within the system to choose from—with the child's best interests in mind.

### Parents

Parent concerns must also be taken into account. Some parents wish to have as much time as possible at home with their children before first grade, while others must make child care arrangements before and/or after school (see Alexander, 1986). Systems may want to consider offering parents a choice of day length.

Parents who prefer to spend more time with their children will most likely not choose to enroll their children in full-day programs. Although the number of parents who have this flexibility has been dwindling, 46% of mothers with children younger than 6 are *not* in the labor force (Select Committee on Children, Youth and Families; 1987); of those who are considered part of the labor force, many are currently unemployed, work part-time, and/or work at home.

Parents who work away from home must rely on some form of care for their children for the entire day. Unfortunately, especially in low-income communities, some children in full-day kindergarten are left to fend for themselves, or are cared for by slightly older siblings or neighbor children,

*Others may tend to focus on short-term, highly visible results of kindergarten, but administrators concerned about each child's long-term progress through the*

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for the 2 or 3 hours remaining between the end of school and the time parents return from work.

In contrast, when children attend half-day kindergarten, parents usually make other provisions to ensure that children are supervised for the remainder of the day. Frequently, a family day care program or a nearby child care program is flexible enough to take children for the other half of the day.

What child care considerations must be addressed if kindergarten program hours are shortened, or if only half-day programs are currently available? Are employed parents being forced to seek after-school care elsewhere if it is not offered in the public schools? Are children spending a good part of their day being shuffled from morning child care, to kindergarten, to afternoon child care, and finally to their homes? How are the children transported? Are enough affordable, accessible, high-quality programs even available in the community? (In most communities they are not: There are affordable programs, which may not be good enough; good programs that may be very expensive; or good programs that are very inconveniently located for some families.)

A good early childhood program offers the same opportunities for learning and development, regardless of whether it is called nursery school, pre-K, child care, Head Start, kindergarten, or something else. Certainly more continuity can be maintained if the children remain in one program for the entire day, rather than moving between two or three different ones.

Longer program days offer the potential for increased parent involvement, too. Parents may be able to take off work during their lunch hours, for example, but would be unable to leave during regular morning or afternoon kindergarten hours. Research is very clear about the benefits of parent participation for their child's education so here is another consideration.

**Teachers**

Teacher perspectives should also be taken into account. One national study asked teachers in half-day programs what kept them from teaching kindergarten as they would like to teach it. "Lack of time for individual instruction and guidance" was first on their list (Educational Research Service, 1986b). No matter what the educational approach, a good kindergarten teacher has a great deal to do each day to prepare for the next day.

Many kindergarten teachers have a morning class and an afternoon class. It is not unusual for a teacher to have 50 children to plan for and educate each weekday. Many of these teachers feel they can develop more con-

*school system consider subtler long-term results of kindergarten, too, such as whether kindergarten increases or diminishes motivation to learn.*

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tinuity in their programs when they teach one group for an entire day. For example, block structures can be left up overnight. In half-day programs, children's constructions must be taken down so that another group can use the facility during the next session.

Teachers in 5-day-a-week full-day programs can get to know children and their families better, and thus can better individualize the language, literacy, and math activities they offer, as well as help children experience much more in-depth art, music, drama, science, and social studies (including familiarity with cultures, traditions, and languages represented by the children's families; and the similarities among *all* the families). Full-day and extended-day programs allow time for more field trips and the provision of a broader range of activities and materials. How much better for everyone if teachers get to know 25 families and children well, instead of barely recognizing the names of 50 families, and have time to reach and teach each child in depth instead of having to leave so much out of the curriculum or skim over it.

**Administrators**

One of the primary considerations in deciding whether to lengthen the kindergarten day has always been cost: Twice as many full-time teachers may be needed; space may or may not be available for classroom, playground, gym, and cafeteria use; utility bills will be higher because of longer hours of classroom use; consumable supplies such as paints, glue, and paper must be purchased in larger quantities; equipment must be purchased for twice as many classrooms; and food service costs may rise. If qualified paraprofessional aides in each classroom for all or even just half of the day are seen as critically important, the cost of these salaries must also be considered. On the other hand, transportation costs may be reduced if bus and crossing guard schedules are adjusted, and if bus sizes can accommodate more children.

Scheduling and staffing, not only for transportation, but for other services, is another issue. Playgrounds, cafeterias, and other special use rooms may all have heavier demands within the school day. Likewise, other school services such as health care would be used more heavily.

For good administrators, as well as for everyone else involved, *one* of the bottom line questions has got to be: *How much time is needed for teachers to offer an appropriate curriculum?* When all the considerations are taken as a whole—children's development; individual differences; the necessity of involved play for learning; the necessity of weaving literature, poetry, reading, writing, drawing, dictating, math, science, social studies, art, drama,

***Longer kindergarten days increase the chances that both the long-term and short-term goals for children will be achieved.***

music, guidance, coordinating with special teachers, and all the rest of the teaching expected of a good kindergarten teacher into play and teacher-planned projects throughout the day; the value of building close relationships among children, staff, and families; and administrative and adult needs—it appears that longer kindergarten days increase the chances that both the long-term and short-term goals for children will be achieved (see Fromberg, 1986; Herman, 1984; Naron, 1981).

How important *is* it for children to be offered an optimal kindergarten program? Judging from the research literature, experience, and common sense, getting each child off to a good educational start does make sense—*dollars and sense.*

*Longer program days offer the potential for increased parent involvement.*

## Directions for policy

The length of the kindergarten day is a deceptively simple issue. As always, however, the best interests of children—their developmental needs—should be at the heart of any decisions. Schools will be more likely to serve the children best if they let these principles, derived from the research not only on length of day but more importantly on how children grow and learn, guide decisions about the length of the kindergarten day.

***Offer an appropriate curriculum during whatever number of hours children are in school.*** Children learn best in appropriate programs. Therefore, teachers trained in child development and in early childhood education are essential to ensure that time and resources are most effectively used to promote children's growth and development, including intellectual and academic learning. The National Association for the Education of Young Children urges schools to hire qualified staff to help ensure the appropriateness of the curriculum:

> Early childhood teachers should have college-level specialized preparation in early childhood education/child development. Teachers in early childhood programs, regardless of credentialed status, should be encouraged and supported to obtain and maintain current knowledge of child development and its application to early childhood educational practice.
>
> Early childhood teachers should have practical experience teaching the age group. Therefore, regardless of credentialed status, teachers who have not previously taught young children should have supervised experience with young children before they can be in charge of a group. (Bredekamp, 1987, p. 1)

Longer days enable teachers to develop a fuller, more multifaceted program using the methods that are most effective with young children: hands-on, project-type learning activities, often centering around or growing out of children's spontaneous play, sometimes planned and initiated by the teacher, always including children in planning along the way, always involving children in active roles. Learning activities that are most effective cross, yet include, all "subject" areas as we traditionally think of them, many of which are taught by extending and expanding the peer interactions and the play children are engaged in during long indoor and outdoor play periods.

Equally as important as longer days, or perhaps more important, are principals and other administrators who support teachers in providing appropriate programs.

***Consider a longer day.*** There are advantages to a longer school day for many children when their parents are employed outside the home. Research suggests that making available programs as long as the elementary-school day (approximately 6 hours) and extended day programs (8 to 10 hours) is a good policy. The needs, especially of low-income children, who are generally at greater risk for school failure, can usually best be met in full-day programs. Children whose parents have serious problems such as alcoholism may also be better off in a good school than at home more hours each day.

***Ask early childhood specialists, parents, teachers, principals, and other interested community-minded people to develop a sound rationale for any proposed kindergarten schedule changes.*** School boards must carefully examine what their scope of responsibility is for kindergarten children. Within the framework of the school budget, the needs of children and parents must be carefully considered. In-service training will be an important component in orienting teachers, support staff, and parents to the changes.

***If possible, provide a choice of daily program length.*** The needs of children from different socioeconomic, educational, and cultural backgrounds vary; individual children's needs vary. Teachers need to be supported in meeting individual needs appropriately. Parents' preferences should be heeded when feasible. Some school systems may be able to have some full-day classes and some half-day.

***Choose from two adequate approaches to part-time kindergarten attendance if a longer day is not best.*** If parents or teachers have reason to believe that less time in school is better for *some* kindergartners they can offer a half-day every-day program, or a full-day alternate-day program, with the knowledge that most studies comparing the two schedules find them equally effective.

***Establish fair entry criteria if day-length options are offered*** (half-day or an extended schedule, for example). Will low-income children be given first priority for the extended program? If so, what entry criteria will be used? Will the school budget cover the expense of a longer day so all children have an equal opportunity to enroll? Will children with employed parents be given priority? Does a first-come, first-served policy for program registration discriminate against working parents who cannot take time off to wait in line? Will children whose families have unusual problems be given priority? It is essential that an early childhood community council composed of experts, parents, and school officials seek the best answers to these questions (Berson, 1968).

***Evaluate the short- and long-term effects of any schedule changes.*** Consider how well the program meets its goals by documenting the kindergarten's effects on children, parents, staff, and the school budget. A well-designed research project provides both the local community and other school districts with solid information about the value of the programs in question. In many communities, there are institutions of higher education with faculty who can help plan and implement useful research activities.

Evaluations should include a variety of records about children's academic, social/emotional, and physical progress including parent and teacher observations and anecdotes, rates for retention and referral to special education, and data gathered through other methods, with standardized tests as only one possible indicator. Less effective programs should be revised or cancelled.

## Concluding words

The solutions to many problems currently confronting kindergarten decision makers interlock. When we ensure that kindergarten teachers are educated and credentialed in *early childhood* (not elementary) education, we can rely more on their expert judgments in each individual child's case—therefore we will need to rely less on questionably useful tests. When we offer parents and teachers a *choice* of length of day—half-day, school-day, extended day—and when the decision for each child is based on *that* child's and *that* family's needs, we can wrestle less with how long the kindergarten day should be. And when we offer a flexible curriculum, suitable for a wide variety of young children from various backgrounds, coming to us at varying maturity levels, we can better provide for diverse needs and behaviors—therefore we will need to worry less about who is "ready." *We* will be ready.

***Teachers trained in child development and in early childhood education are essential to ensure that time and resources are most effectively used to promote children's growth and development.***

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**Position statements compiled by S. G. Goffin, M. Meyers, and N. Keel.**

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# *Information about NAEYC*

## NAEYC is . . .

. . . a membership-supported organization of people committed to fostering the growth and development of children from birth through age 8. Membership is open to all who share a desire to serve and act on behalf of the needs and rights of young children.

## NAEYC provides . . .

. . . educational services and resources to adults who work with and for children, including

- ***Young Children**, the* journal for early childhood educators
- **Books, posters, brochures, and videos** to expand professional knowledge and commitment to young children, with topics including infants, curriculum, research, discipline, teacher education, and parent involvement
- An **Annual Conference** that brings people from all over the country to share their expertise and advocate on behalf of children and families
- **Week of the Young Child** celebrations sponsored by NAEYC Affiliate Groups across the nation to call public attention to the needs and rights of children and families
- **Insurance plans** for individuals and programs
- **Public policy information** for knowledgeable advocacy efforts at all levels of government
- The **National Academy of Early Childhood Programs**, a voluntary accreditation system for high-quality programs for children
- The **Information Service**, a computerized, central source of information sharing, distribution, and collaboration

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AS A PERSON IN A POSITION to make decisions about kindergarten curriculum, entry age, testing, and length of day, you will find the research-supported recommendations for policy in this monograph invaluable. If you want guidance on how to apply and implement the recommendations, you will find all the early childhood education specialists you need in school systems, universities, and early childhood organizations in your vicinity. Will you create an advisory group and consider what is best for our young children?

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